ACCURACY

/

SPEED

/

RESPONSIBILITY

/

COOPERATIVE

A1~A12	MANUAL INDEXER / ROTARY TABLE DIVIDING HEAD
A13~A16	MILLING VISE
A17	WORK STOPPER / SELF CENTERING VISE
A18~A20	MODULAR PRECISION / MACHINE VISE
A21	LOCK-FIXED II PRECISION MACHINE VISE COMPOUND PRECISION VISE
A22	HYDRAULIC MACHINE VISE DOUBLE CLAMP VISE
A23~A30	MC POWER VISE
A31~A32	NC HYDRO MACHINE VISE
A33	PRECISION PNEUMATIC ANG-FIXED POWER VISE
A34	QUICK SETTING VISE MACHINE VISE FOR SHAPING & MILLING USE
A35	B-TYPE MILLING VISE FREE VISE / T SLOT CLAMPS
A36~A39	CLAMPING KIT
A40~A43	PARALLELS SERIES
A43	ADJUSTABLE ANGLE PLATE
A44	CROSS TABLE
A45	RIGHT ANGLE HEAD SERIES
A46	POWER TABLE FEED
A47	AIR POWER DRAWER
A48	SLOTTING HEAD
A49	RIGHT ANGLE PLATE SERIES
A50~A51	SCREW JACK / CLAMP / HAND DRIFT
A52	EYE SHIELD / TABLE SLOT COVER VEE BLOCK / AUTO CENTER PUNCH
A53	DRAW BAR / GUARD COVER COLLET RACK / PARTS STORAGE
A54	UNIVERSAL CUTTING GRINDER U2
A55~A57	CHAMFERING & DEBURRING MACHINE
A57~A58	CUTTING-OFF MACHINE SERIES
A59~A68	HALOGEN LAMP / WORK LIGHT SERIES
A69~A72	COLLANT PUMP SERIES

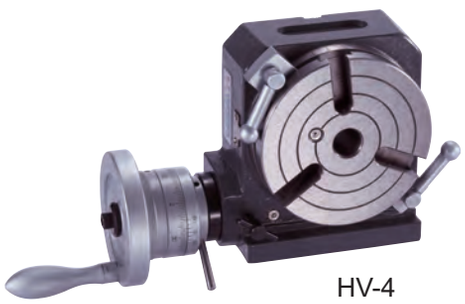
MILLING MACHINE
ACCESSORIES

VERTEX®

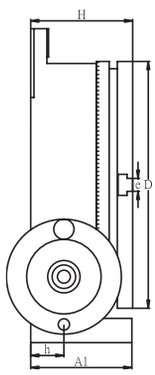
Horizontal / Vertical Rotary Table

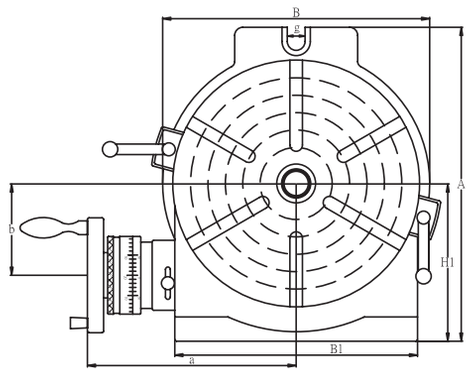
HV-6, 8, 10, 12, 14, 16

Special Accessories (Details on page 2)



HV-4





Specifications

Umit:mm/inches

ORDER NO.	Table			Base dimension			Width of T-soft		Bolt slots	The Load Capacity For Rotary Table		Center sleeve	Gross Weight kg wooden case(W) Carton(C)	Meas. CFT	CODE NO.
	Outer diameter		Height												
	A1	D	H	H1	A	B	e	Type	g	Horizontal	Vertical				
HV-4	58	110	72	79	138	118	11	⊕	12	35 KGS	18 KGS	MT-2	(C) 7.6kgs	0.3	1001-000
HV-6	74 2.91	150 5.91	80 3.11	102 4.02	205 8.07	167 6.57	11 0.43	⊕	17 0.67	40 KGS	20 KGS	MT-2	(C) 12.7kgs	0.4	1001-001
HV-8	100 3.94	200 7.87	105 4.13	135 5.31	265 10.43	220 8.66	14 0.55	⊕	17 0.67	80 KGS	40 KGS	MT-3	(C) 26.9kgs	0.8	1001-002
HV-10	110 4.33	250 9.84	115 4.53	165 6.50	325 12.80	280 11.02	14 0.55	⊛	17 0.67	90 KGS	50 KGS	MT-3	(C) 37.7kgs	2	1001-003
HV-12	130 5.12	300 11.81	135 5.32	195 7.68	388 15.27	330 12.99	16 0.63	⊛	18 0.71	120 KGS	60 KGS	MT-4	(C) 60.6kgs	2.6	1001-004
HV-14	130 5.12	350 13.78	140 5.51	230 9.06	450 17.72	380 14.95	16 0.63	⊛	18 0.71	130 KGS	70 KGS	MT-4	(C) 79.5kgs	3.2	1001-005
HV-16	150 5.90	406 15.98	155 6.10	255 10.03	500 16.69	430 16.93	16 0.63	⊛	18 0.71	140 KGS	70 KGS	MT-4	(W) 118.4kgs	4.2	1001-006

- Our Tables are made of high density Meehanite and use “HEIDENHAIN” electronic equipment to inspect angle to assure the excellent quality and durableness.
- Use excellent machining center to process. Spindle end be applied accuracy bearing. Can be assured to keep very steady under load cutting.
- Worm is hardened and ground. The ratio is 90:1. The work table is graduated a full 360º so that one turn of the handle moves the table through 4º. Micro collar is graduated in steps of 1′min. And vernier scale makes settings down to 10 seconds possible.
- These Rotary Tables are popular for their excellent performance, practical design and reasonable cost. They are widely used for circular cutting work, angle setting, boring, spot-facing and similar work.

Test Report

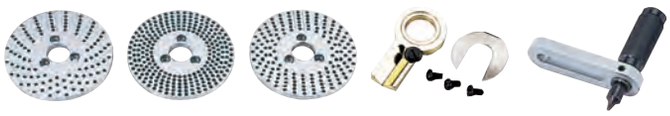
ITEM NO.	TESTING OBJECTIVE	VARIATION (INCHES)(MM) MAXIMUM TESTED	
1	FLATNESS OF CLAMPIING SURFACE (CONCAVE)	.0006(0.015)	
2	PARALLELISM OF CLAMPING SURFACE TO BASE	.0008(0.02)	
3	SQUARENESS OF CLAMPING SURFACE TO ANGLE FACE	.0008(0.02)	
4	TRUE RUNNING OF CLAMPING SURFACE	.0006(0.015)	
5	TRUE RUNNING OF CENTER HOLE MEASURED AT HOLE EDGE	.0008(0.02	
6	INDEXING ACCURACY OF DIRECT INDEXING MECHANISM MAXIMUM CUMULATIVE SPACING ERROR	45″	

Rotary Table Special Accessories

A. DIVIDING PLATES

DP-2, 3, 4, 5

DP-1



ORDER NO.	SUIT FOR MODEL	WEIGHT kg	CODE NO.
*DP-1	for HV-4, HV-6, VUT-6, VU-100, 150	1.4	1001-030

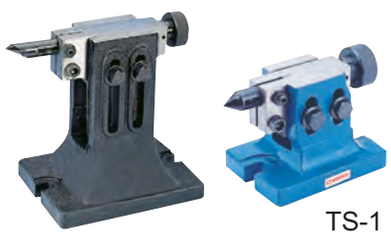
A-Plate	15, 16, 17, 18, 19, 20
B-Plate	21, 23, 27, 29, 31, 33
C-Plate	37, 39, 41, 43, 47, 49

*DP set include index plate. crank handle, 3 pcs screw, sector, & U Washer.
1 carton with 1 set. Gross weight: 3.5kgs.
Meas.: 0.13 CFT.
Number of the holes of Dividing Plates

ORDER NO.	SUIT FOR MODEL	WEIGHT kg	CODE NO.
* DP-2	for HV RT -8, VU-200	4.5	1001-031
DP-3	for HV -10, 12, 14, 16, VUT-10, RT -12	4.6	1001-032
DP-4	for CS-6, 8	4.6	1001-033
DP-5	for VU-300	4.6	1001-034

A-Plate	26, 30, 34, 38, 41, 44, 47, 51, 57 28, 32, 37, 39, 43, 46, 49, 53, 59
B-Plate	61, 67, 71, 77, 81, 87, 91, 97 63, 69, 73 ,79, 83, 89, 93, 99

B. TAILSTOCK



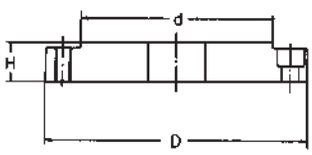
TS-1

Unit:mm

ORDER NO.	adjustable highest	adjustable lowest	SUIT FOR MODEL	G.W. kg	Meas. CFT	CODE NO.
TS-1	108	80	HV-4, HV-6, VSI-4, VSI-5, BS-0, VUT-6, VU-100, VU-150	3.9	0.4	1001-022
TS-2	145	115	BS-1, CC-6 CS-6, HV-8	5.5	0.4	1001-023
TS-3	200	130	CS-8, HV-10, HV-12, CC-8, VUT-10, VUT-12, VU-200	8.1	0.4	1001-024
TS-4	260	190	HV-14 HV-16	11.9	0.7	1001-025

C. FLANGE

FLT-0 For VSC-5F
FLT-1 For VSC-6F
FLT-2 For VSC-7F
FLT-3 For VSC-8F



Unit:mm

ORDER NO.	D	d	H	SUIT FOR MODEL	WEIGHT	CODE NO.
FLT-0	138	100	20	RT- HV- 6, 8	1.9	1001-040
FLT-1	170	130	21	RT- HV- 8, 10	3.3	1001-041
FLT-2	195	155	24	RT- HV- 10, 12, 14	5.2	1001-042
FLT-3	210	160	24	RT- HV- 12, 14, 16	4.9	1001-043

Precision 3-Jaw Scroll Chuck

- **Detail specification & Order NO. shown on page E5**

ORDER NO.

VSC-5A	SUIT FOR BS-0 OR HV-6, VUT-6, VU-150
VSC-6A	SUIT FOR BS-1 OR HV-8, 10, VUT-6, VU-200
VSC-7A, 8A	SUIT FOR BS-2 OR HV-10, 12, 14, VUT-10, 12
VSC-10A	SUIT FOR HV-14, 16

Reversible type

For indexer, The fixing hole is from front.

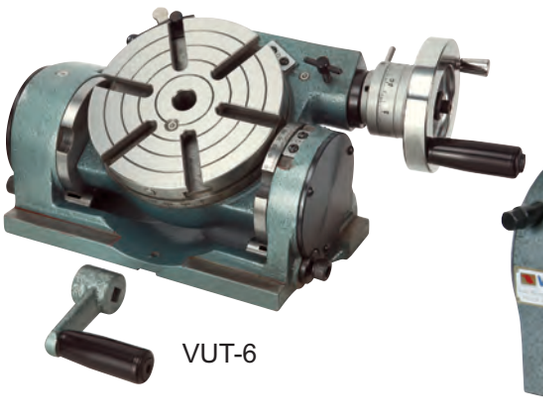
ORDER NO.

VSK-6A	SUIT FOR CS-6, CC-6
VSK-8A	SUIT FOR CS-8, CC-8
VSK-12A	SUIT FOR CC-12

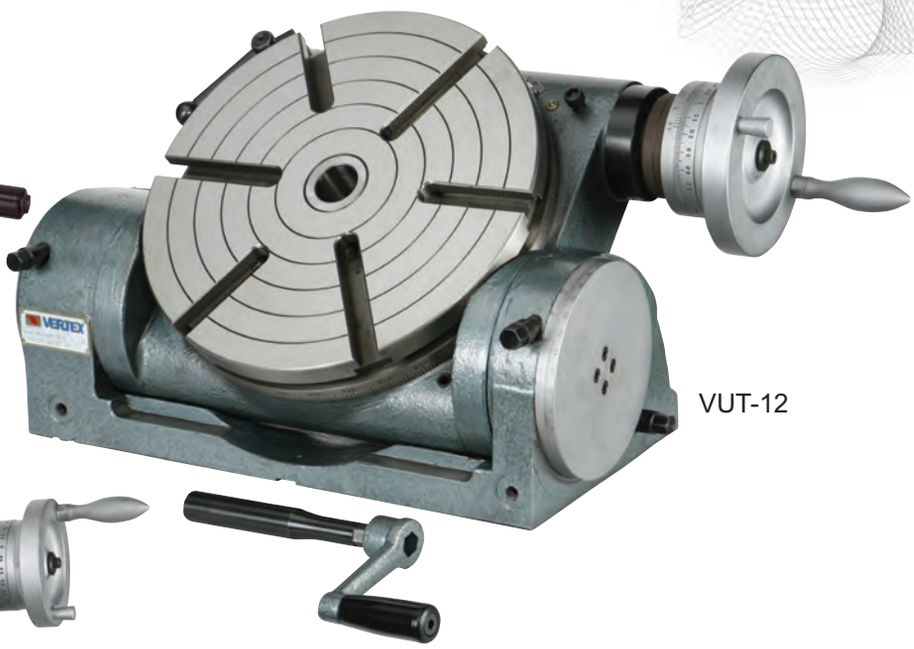
Tilting Rotary Tables

NEW

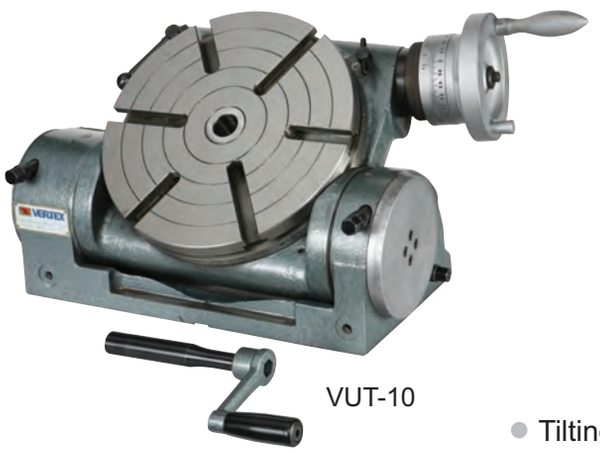
Heavy Duty Type, Rigid & Strong Design



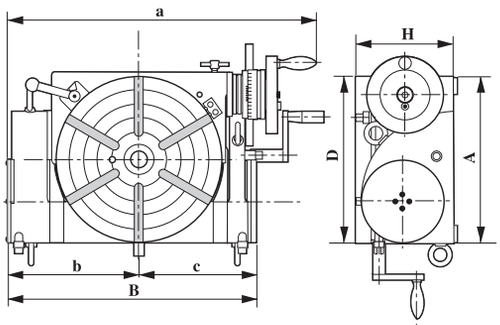
VUT-6



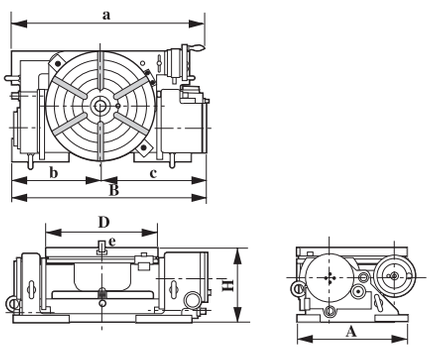
VUT-12



VUT-10



- Tilting by rigid & strong design, 2 supporter & rigid clamping system construction.
- Minimum set-up time.
- Tilting angle can adjusted by worm & worm gear system.
- Accurate and built for use in milling, boring and other machines.
- Indexing, facing and other operations can be done rapidly with extreme precision.
- Worm shafts are hardened and ground.
- Indexing can be done with optional dividing plates.
- DP-1 for VUT-6, DP-3 for VUT-10, VUT-12.
- Tailstock TS-1 for VUT-6, TS-3 for VUT-10, VUT-12.



MAIN SPECIFICATIONS		VUT-6	VUT-10, VUT-12
TILTING	Degree per one handle rotation	6º	1º
	vernier reading	1’	2’
TABLE	Degree per one handle rotation	4º	4º
	Scale of micro collar	1’	1’
	vernier reading	10”	10”
	Gear ratio	1:90	1:90

Specifications

ORDER NO.	TABLE DIAMETER & TABLE HEIGHT			MOUNTING SURFACE		OVER ALL SIZE			T-SOLT WIDTH	CENTER HOLE	CENTER HEIGHT (Tilted at 90º)	WEIGHT (kg)	CODE NO.
	D	H	h	A	B	a	b	c	e				
VUT-6	150	115	165	180	268	380	143	125	10	MT-2	90	23.5	1001-014
VUT-10	250	155	275	255	397	495	210	187	12	MT-3	150	75.5	1001-015
VUT-12	300	178	319	300	447	551	235	212	14	MT-4	169	108	1001-016

Semi-Universal Dividing Head

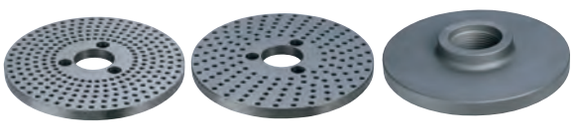
THREAD SPINDLE:
BS-0. 1 1/8 - 12TPI
BS-0. 1 1/2 - 8TPI

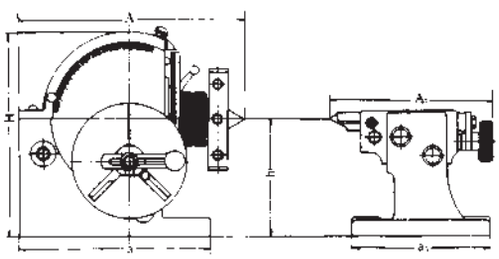
ORDER NO.	WEIGHT(kgs)	CODE NO.
BS-0	19	1001-050
BS-1	33.5	1001-051
BS-0-J-5	24	1001-053
BS-1-J-6	42	1001-054

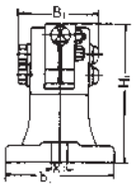
Dividing Plate A, B, C

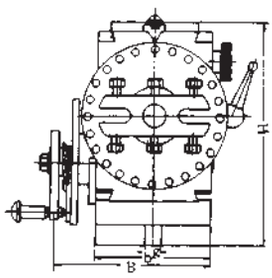
Plate A	15	16	17	18	19	20
Plate B	21	23	27	29	31	33
Plate C	37	39	41	43	47	49

Standard Accessories









Semi-Universal Index B & S Type No. 0 No. 1 (Head-stock):

Unit:mm/inches.

ORDER NO.	A	B	H	h	a	b	g	TAPER OF CENTER	Diameter of spindle hole
BS-0	189 7 7/16	140 5 23/64	173 6 13/16	100 3 15/16	160 6 19/64	91 3 37/64	13 33/64	MT-2	18
BS-1	293 11 17/32	156 6 9/64	220 8 21/32	128 5 3/64	207 8 5/32	114 4 31/64	16 5/8	MT-3	20

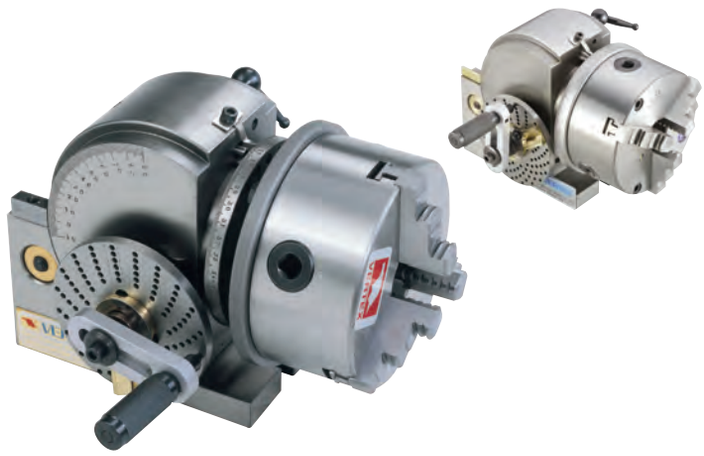
Semi-Univerasl Index B & S Type No. 0 No. 1 (Tail-Stock):

Unit:mm/inches.

ORDER NO.	A1	B1	H1	h	a1	b1	g1
BS-0	167 6 37/64	80 3 5/32	107.5 4 15/64	100 3 15/16	130 5 1/8	92 3 2/8	13 33/64
BS-1	191 7 33/64	88 3 15/32	137 5 25/64	128 5 3/64	150 5 29/32	108 4 1/4	16 5/8

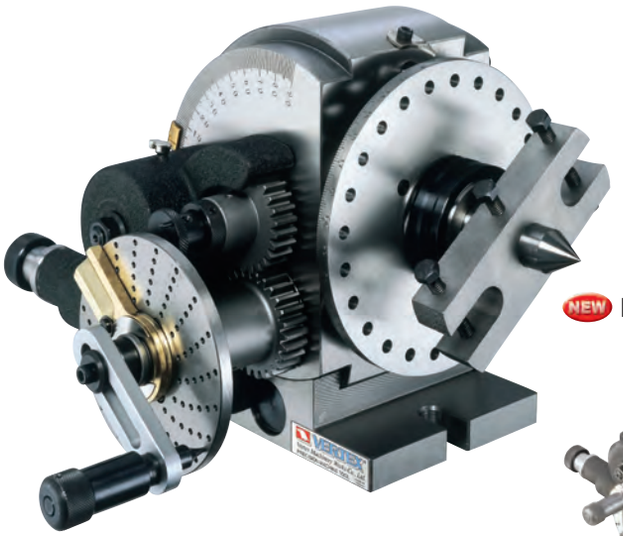
- Dividing Head can divide in any angle by the direct, in-direct, or different methods. The ratio between the warm and the warm gear is 40:1.
- Hardened and ground spindle is rigidly held in a taper roller bearing. Worm is hardened and ground also.
- The swivel head can be locked of any angle from 10º below horizontal to 90º vertical-precision fitting to base assures smooth rotation.
- All models have threaded spindle nose and 24 hole dividing plate with easy conversion to fast direct indexing on numbers 2, 3, 4, 6, 8, 12, and 24.
- Easy indexing of all numbers from 2 to 50 and many numbers from 52 of 380. Model BS-2 is also equipped for different indexing of all numbers from 2 to 380, and for spiral cutting.
- Accurate precision, little backlash, fine appearance and strong structure so can assure smooth rotation.

NEW MODEL FOR NEXT



BS-0-J is
BS-0 fitted with 5″ 3-Jaw Chuck & Standard Accessories

Universal Dividing Head



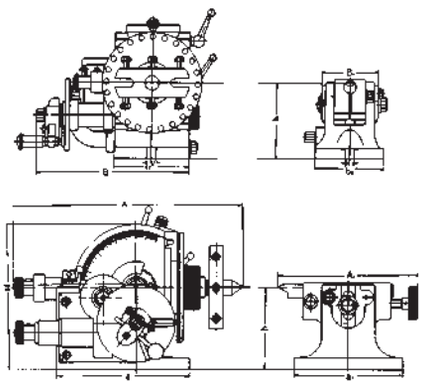
THREAD SPINDLE: 2 1/4" - 8TPI

NEW MODEL FOR NEXT

Standard Accessories

BS-2-J IS BS-2 WITH 6" 3 JAW CHUCK & STANDARD ACCESSORIES

NEW MODEL FOR NEXT



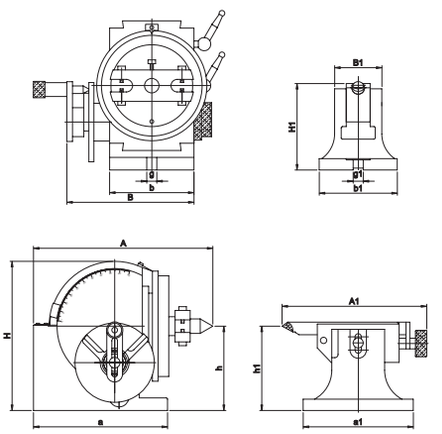
BS-2A

NEW

BS-2A COMES WITH A TAIL STOCK, A SET OF DIVIDING PLATE, A SET OF CARRIER CLAMP, A 3 JAW PLATE, A CENTER

BS-2A BODY STRUCTURE IS SAME AS BS-2 WITHOUT CHANGING GEAR ARBOR OR BRACKET. OTHER ACCESSORIES ARE SAME AS BS-2.

Standard Accessories



ORDER NO.	WEIGHT(kgs)	CODE NO.
BS-2	65	1001-052
BS-2-J-6	78.5	1001-055
BS-2-J-8	80	1001-056
BS-2A	36	1001-057
BS-2A-J-6	42	1001-058
BS-2A-J-8	49	1001-059

Universal Index B & S Type No.2 (Head-stock):

Unit:mm/inches.

ORDER NO.	A	B	H	h	a	b	g	Taper of center	spindle hole
BS-2	365 14 13/32	272 10 45/64	236 9 13/64	132.7 5 15/64	213 5 25/64	134 5 9/32	16 5/8	MT-4	25.4 1
BS-2A	285	202	237	134	213	134	16	MT-4	25.4

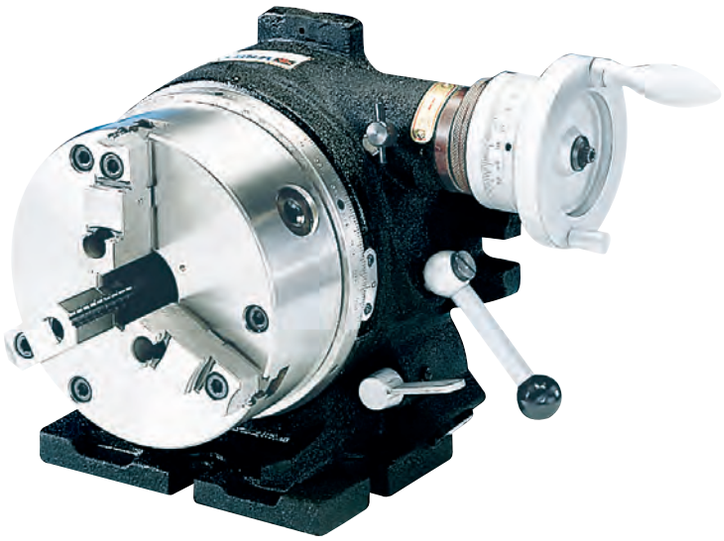
BS-2 (Tail-stock)

Unit:mm/inches.

ORDER NO.	A1	B1	H1	h1	a1	b1	g1
BS-2	205~255 8 5/64~10 5/64	86 3 15/32	139 5 15/32	132.7 5 15/64	175 6 57/64	124 4 7/8	16 5/8
NEW BS-2A	218	74	139	134	175	124	16

ORDER NO.	Gross Weight kg	Meas. CFT	Applicable Chuck
BS-0	(C)20	0.8	5"
BS-1	(C)33	1.3	6"
BS-2	(C)65	3.4	6" OR 8"

Super Indexing Spacer



Standard Accessories

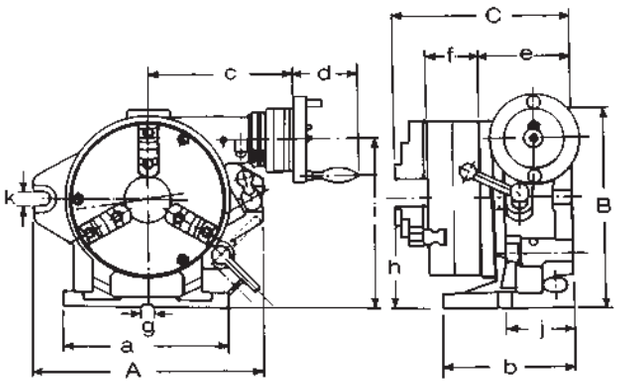
Special Accessories

The same as Rotay table
Please see page A2

CS-8 with VSK-8 3-JAW MASKING PLATE & FACE PLATE

This product combines the advantages of the Super Index with those of a worm-geared index. When mounted on a milling, boring or other machine tool it can carry out single-purpose indexing and indirect indexing using the worm-drive mechanism. Disengaging the worm drive the 24-notch master plate permits 2, 3, 4, 6, 8, 12 and 24 dividing in the same manner as the Simple Index. When the chuck is removed, the unit can be used as a horizontal and vertical type rotary table. The operating handle to rotary table worm gear reduction ration is 1:90. The operating handle collar is graduated in one minute, and readings down to ten seconds can be set on the vernier.

- Super spacer index include 3 jaw chuck, 10″/250mm face plate, masking plates 2, 3, 4, 6, 8, 12.



The state of CS-8 fitted with Face Plate & Dividing Plate

Specifications

Unit:mm

ORDER NO.	Numbers of divding	Chuck				Face plate		A	B	C	a
		Outer diameter	Inner jaw	Outer jaw	Inner dia	Outer dia	Thickness				
CS-6	2, 3, 4, 6 8, 12, 24	167 VSK-6	4~42	10~156	44	203	50	250	235	221	220
CS-8		210 VSK-8	4~62	10~180	63	254	58	310	285	243	225

Unit:mm

ORDER NO.	b	c	d	e	f	g	h	i	j	k	Gross Weight kg	Meas. CFT	CODE NO.
CS-6	150	184	82	112	66	16	123	186	80	18	(W)44.5	1.2	1001-060
CS-8	160	201	82	125	75	16	155	232	90	18	(W)71.5	3.1	1001-061

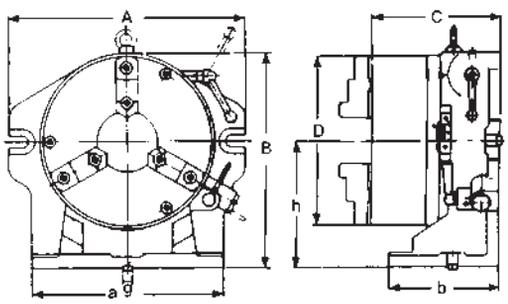
(W)Wooden Case (C)Carton Case

Simple Indexing Spacer

CC-12
BIG HOLE DESIGN

CC-8

- The center through hole is big to be suitable for the large and long workpiece.
- Hardened and ground 24 position master plate, can index the special angle of 15 with excellent accuracy.
- CS-Type can be used with 2 pcs type 3-Jaw Chuck. Especially, it does similar work. as rotary table when it match with face plate.
- Rapid indexing and easy operation. It's a sharp equipment for mass-production.
- Simple index include 3-jaw chuck, Masking Plates 2, 3, 4, 6, 8, 12
- Used the key guide block, the center can be corrected quickly and accurately.
- CC-6 WITH VSK-6A CHUCK
  CC-8 WITH VSK-8A CHUCK
  CC-12 WITH VSK-12 CHUCK



Special Accessories

STANDARDS OF ACCURACY for Simple Index for Super-Dex.		
NO.	Testing Objective	Tolerances Unit: inches Permitted Max.
1	Parallelism of table surface to base per 12″	.0006
2	True running of axial movement of table surface	.0006
3	True running of center boss	.0004
4	Squareness of base to angle face per 12″	.0008
5	True runing of chuck center	.0012
6	Dividing accuracy individual spacing error	45″

Specifications

Unit:mm

ORDER NO.	Dividual number	A	B	C	D	a	b	h	Inner jaw	Guide black g	Outer jaw	Diameter of hole (turret)	Diameter of hole (chuck)	Gross weight kg	Meas. CFT	CODE NO.
CC-6	2, 3, 4, 6 8, 12, 24	260	218	156.2	167	220	130	123	4~42	16	10~156	44	44	(C)29.5	0.9	1001-062
CC-8		312	257	173.3	200	258	148	155	4~62	16	10~180	63	58	(C)51.5	1.3	1001-063
CC-12	2, 3, 4, 6 8, 12, 16 24, 48	433.2	391	232.5	310	353.8	198.3	228	5~108	16	15~265	106	105	(W)90.7	3.6	1001-066

Precision Index Table

2 PCS HIRTH Coupling

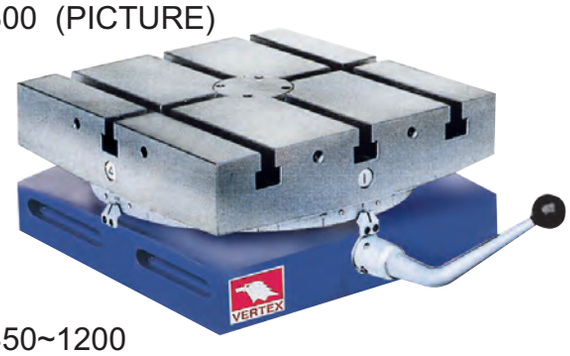
VIT-450~1200 PICTURE

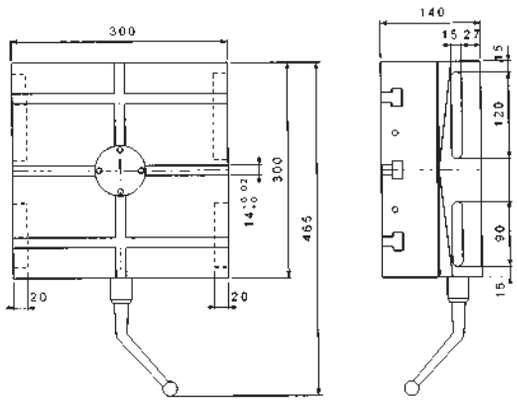
ORDER NO.		VIT-300-15	VIT-450-1 VIT-450-5	VIT-600-1 VIT-600-5	VIT-700-1 VIT-700-5	VIT-800-5	VIT-1000-5	VIT-1200-5
Table size LxW (mm)		300x300	450x450	600x600	700x700	800x800	1000x1000	1200x1200
Height (mm)		140	170	200	220	280	300	340
Spindle hole (mm)		-	ø30	ø40	ø40	ø60	ø60	ø80
T-slot (mm)		14	18	20	20	22	22	22
Table rotating			Clockwise and counterclockwise					
Table Lifting up & Clamp down stroke (mm)		5	5	5	5	5	8	8
Driving	Longitudinal	Manual	Air Pressure 5~8kgs/cm²					
	Revolving		Manual					
Number of division (degree)		15º	1º or 5º					
Division (sec.) Accuracy			±3					
Max. load weight in theory (kgs)		1200	2400	3400	3400	4500	6000	7000
Allowable load weight (kgs)		500	1000	2000	2000	3000	5000	6000
Clamping capacity (kgs)		-	2200	3200	3200	5400	5400	8100
N.W. (kgs)		94	205	400	600	900	1200	2000
CODE NO.	1º	1001-070(15)	1001-071	1001-072	1001-073			
CODE NO.	5º		1001-081	1001-082	1001-083	1001-084	1001-085	1001-086

- The body is FC-35 cast iron, durable and will last longer without deformation.
- Clamping/Unclamping by pneumatic, easy operation.
- Powerful clamping design, allow heavy cutting and boring.
- Build-in 2 pieces hirth coupling for positioning, indexing accuracy +/-3 sec, ensure a long-term operation.
- Suitable for the high accuracy machining such as Boring-Milling, Grinding-Machine.

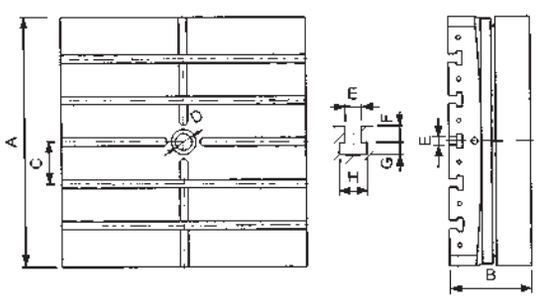
DIMENSION

VIT-300 (PICTURE)



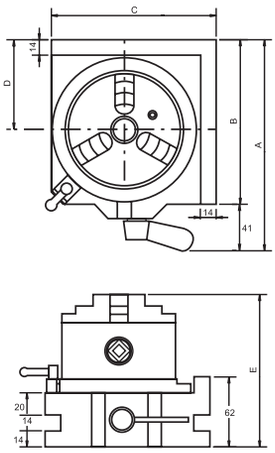


VIT-450~1200



	VIT-450	VIT-600	VIT-700	VIT-800	VIT-1000	VIT-1200
A	450	600	700	800	1000	1200
B	170	200	220	280	300	340
C	100	100	125	100	150	200
D	30	40	40	60	60	80
E	18	20	20	22	22	22
F	16	20	20	23	23	23
G	12	14	14	15	15	15
H	28	35	35	38	38	38

Economical Type Rapid Index



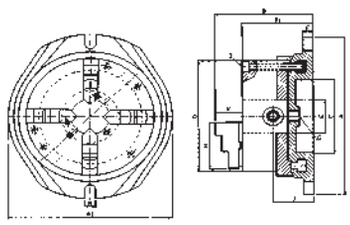
5C COLLET INDEXER
NON ECONOMICAL

- 3 JAW CHUCK VSC-4A, for VSI-4 / VSC-5A for VSI-5, the big range clamping capacity ø3 - ø100, it's better than collet fixing type.
- Simple & rapid operation.
- Dividual number 24-notch (15º each)
- Table scale 1º, for angular indexing.
- Table bore 30mm.
- Horizontal / vertical & 2 direction
- Suit for milling & drilling machine using.
- Optional: tailstock TS-1, Please see page A2

ORDER NO.	A	B	C	D	E	kgs	CODE NO.
VSI-4	187	146	146	80	135	10.5	1001-064
VSI-5	202	161	161	87	142	14.5	1001-065

Simple Rotary Chuck

NEW



VSR-6 WITH VPS-6A CHUCK
VSR-8 WITH VPS-8A CHUCK

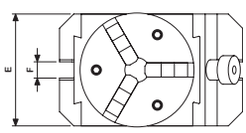
- 4-jaw chuck (include reversable and removable jaw) is designed with swivel base for multifunctional purpose.
- VERTEX simple rotary chuck can be placed and fixed on your desired position.
- 360º vernier scale: smooth swival motion and easy locking by screws.
- Both horizontal and vertical position could be used on milling and machining center.

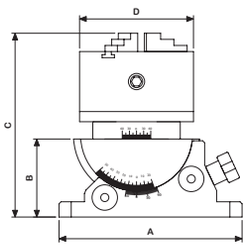
ORDER NO.	A	A1	B	B1	C	D	F	G	H	I	J	K	M	kgs	CODE NO.
VSR-6	244.6	233.2	139.3	110.4	100	160	14.9	25	70.6	3-M8	69	28.9	14	18	1001-066
VSR-8	340	269.4	159	124.6	115	200	18.4	25	86	3-M10	75.7	34.4	18.4	30.5	1001-067

Precision Universal Angle Chuck

NEW

With VSC-4 Chuck

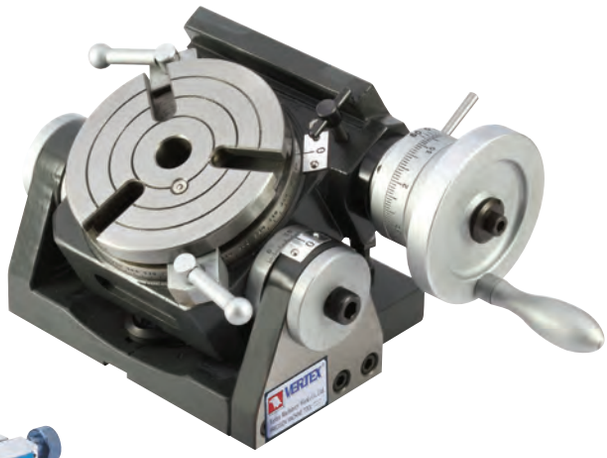


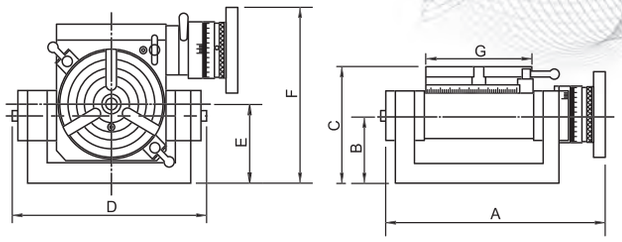


- Precision graduction for accurate reading.
- Its swivelling and tilting features make this unit well suited for straight or inclined surface, angular driling machining on various machine tools.
- With VSC-4 3-Jaw chuck.
- O.D. clamping Ø3-90 mm,
- I.D. clamping Ø32-84 mm.
- Tolerence ±0.01mm/100mm.
- 2 axis with angle scale
- For angle setting
- Chuck indexing / Rotating setting
- Tilting Features same as VUA series, Page B5.

ORDER NO.	A	B	C	D	E	F	G.W (kgs)	CODE NO.
VUA-100J	180	77	181	112	110	16	14	2003-060

Universal Tilting Rotary Table





- Tiliting range 0-90 degrees from horizontal to vertical postion, It is high rigidity.
- Minimum Set-up time: It has two screws to lock setting. Low profile body for bigger capability.
- Worm is hardened and ground. The ratio is 90:1. The work table is graduated a full 360º so that of the handle moves the table through 4º. Micro collar is graduated in steps of 2' min.
- The tailstock & Dividing plates are optional. The sizes is same as the rotary table, please see page A2.
- For arc or index cutting at milling machine, Grinding machine or drill Machine.....

OPTIONAL:

1. TAILSTOCK

ORDER NO.	CODE NO.
TS-1	1001-022
TS-3	1001-024

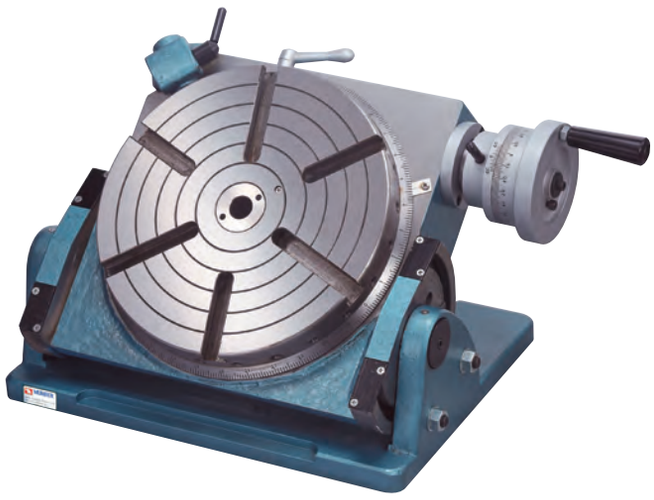
2. DIVIDING PLATE

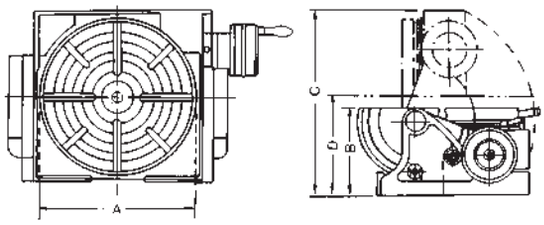
ORDER NO.	CODE NO.
*DP-1 for VU-100, 150	1001-030
*DP-2 for VU-200	1001-031

ORDER NO.	A	B	C	D	E	F	G	SUITABLE TAILSTOCK	SUITABLE DIVIDING PLATE	WEIGHT kgs/cuft	CODE NO.
VU-100	228	68	117	202	80	177	100	TS-1	DP-1	13.5kgs/1.5	1001-011
VU-150	266	75	140	246	90	216	150	TS-1	DP-1	21.5kgs/2.0	1001-012
VU-200	429	111	177	432	141	283	205	TS-3	DP-2	46kgs/2.5	1001-013

Universal Tilting Rotary Table

ORDER NO.VU-300 CODE NO.1001-010





This is an accurate designed table for milling, boring and other machine tools.
This table allows indexing, facing and other work to be carried out rapidly with extreme precision.
Tiliting range 90 degrees from horizontal to vertical position, 1 rotation of handle equals 3 degrees, 5 minutes tilting reading.
10 Second Vernier Scale.

- Table Dial 1 Minute Graduations.
- Fast Degrees: Dividing Notch Pin & 24 Holes in 15 Degress
- Around that insures Rapid & Accurate Spacing.
- Minimum Set-Up time.
- Rugged Construction.

Order No. & Dimensions

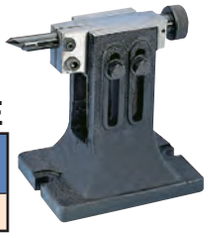
ORDER NO.	VU-300
TABLE DIAMETER A	300mm
TABLE HEIGHT (horizontal) B	185mm
TABLE O/A HEIGHT (VERTICAL) C	370mm
CENTER HOLE	MT3
CENTER HEIGHT (vertical) D	208mm
DIRECT INDEXING	24-div
GEAR RATIO	90:1
WEIGHT (G.W.)	102kgs
WEIGHT (N.W.)	99.5kgs

Special Accessories

1. DIVIDING PLATE DP-5
2. TAILSTOCK

TSU-2 ECONOMICAL TYPE

ORDER NO.	WEIGHT kgs	CODE NO.
TSU-2	12	1001-021

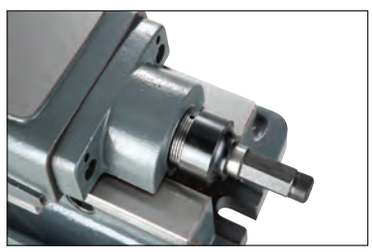


Hydraulic Machine Vise

PAT NO. 98202966

- New design: Adjustable pressure device.
- Suit for processing of brass, AL, plastic, steel.

- New design: lock proof system: prevent wrong clamping force stucks the vise.
- Ruggedly constructed for milling, drilling, shaping, grinding and many other machine shop applications.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Hydraulic-booster system for maximum clamping pressure with minimum force.
- Quick of clamping & locking and easy of operation.
- Accurance within 0.02mm.
- Furnished with or without swivel base.
- Hydraulic-booster system is guaranteed for using 1 years limited.
- The hydraulic oil number is #68.
- For Hydraulic-booster trouble shooting, please see manual.

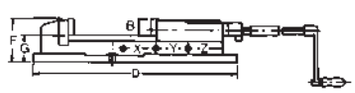


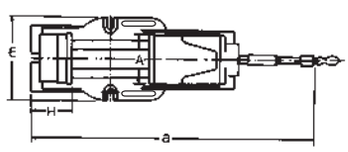
Hydraulic controller:
provide stable pressure,
hydro indexer.

Order No. & Dimensions

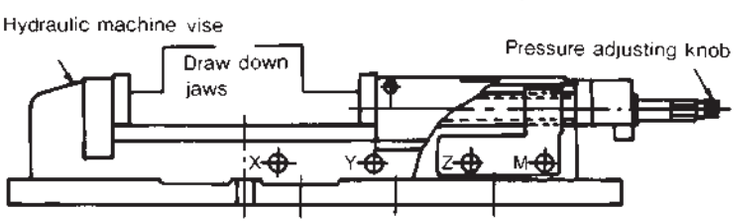
Unit:mm

ORDER NO.	A	B	C OPEN	a	D	E	F	G	H	Max. Clamp Force	G.W. (kg)	Meas CFT	CODE NO.
VH-4	105	36	170	525	440	170	95	58	95	3750kgs	(C)27.2	0.8	1002-001
VH-5	130	48	210	670	550	207	120	70.5	107	4500kgs	(C)47.4	1.5	1002-002
VH-6	150	53	300	800	620	225	135	82.5	117	5250kgs	(C)63	2.2	1002-003
VH-8	200	62	300	900	680	280	162	100	150	6000kgs	(W)106.6	3.6	1002-004
NEW VH-8L	200	62	400	900	780	280	162	100	150	6000kgs	(W)123		1002-005

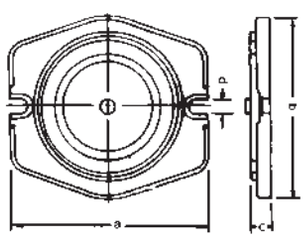




CLAMPING CAPACITY
(3 STEPS CLAMPING POSITION FIG)



Swivel base



Max. Opening Size Clamping Capacity

Unit:mm

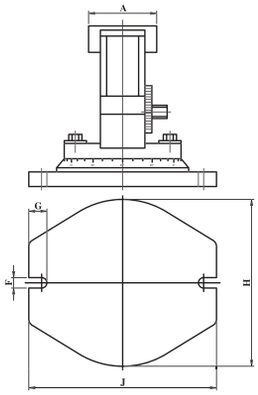
ORDER NO.	X	Y	Z	M
VH-4, VHT-4	0-60	57-115	110-170	
VH-5	0-70	68-144	142-210	
VH-6, VHT-6	0-100	95-200	195-300	
VH-8	0-100	98-200	195-300	
VH-8L	0-100	98-200	195-300	300-400

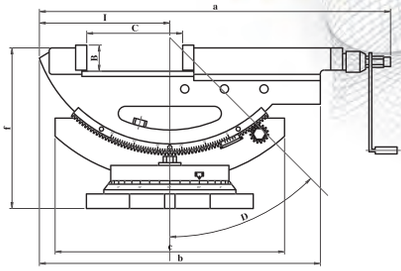
Swivel base

Unit:mm

ORDER NO.	a	b	c	d	G.W. (kg)	CODE NO.
HS-4	280	210	28	16	4	1002-010
HS-5	297	267	33	16	7	1002-011
HS-6	335	310	36	19	10	1002-012
HS-8	373	355	41	19	16	1002-013

Tilting Hydraulic Machine Vise





- The same as characters of VH type. Swivel base same as VH type.
- Tilting seat set by two locking screws, works in high stability.
- Angle setting ranges from 0º~50º. Tilting degrees graduated for easy reading. Swivel base graduated to 360º and fixable in any position.
- THE (3 STEPS CLAMPING POSITION) SAME AS VH TYPE.
- Accuracy within 0.02mm
- Hydraulic-booster system is guaranteed for using 2 years limited.

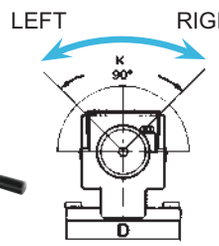
Unit:mm

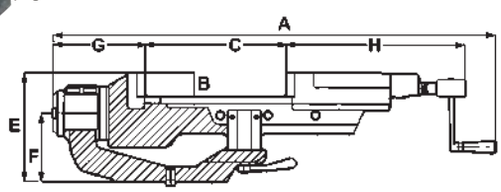
ORDER NO.	A	B	C OPEN	D	E	F	G	H	J	a	b	c	f	Max. Clamp Force	G.W. (kgs)	Meas CFT	CODE NO.
VHT-4	110	36	220	50	15	15	26	240	270	500	404	335	230	2500kgs	(W)33.3	1.2	1002-020
VHT-6	154	54	350	50	20	19	28	300	330	800	585	415	290	4500kgs	(W)88	4.4	1002-021

Universal Tilting Hydraulic Machine Vise

PAT NO. 98202966

NEW





- NEW DESIGN: ADJUSTABLE PRESSURE DEVICE.
- SUIT FOR PROCESSING OF BRASS, AL, PLASTIC, STEEL.
- NEW DESIGN: SUPER OPEN JAW SIZE, SMALLEST OPEN JAW SIZE.

LOCK PROOF SYSTEM: PREVENT WRONG CLAMPING FORCE STUCKS THE VISE.

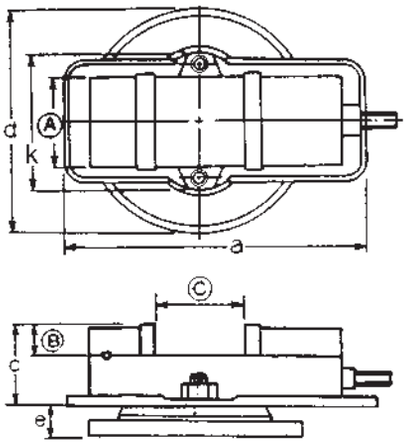
- 45 DEGREE TILTING FUNCTION, ALLOW 90 DEGREE PROCESSING!
- TILTING FUNCTION HAS MORE WORK FREE ALLOWANCE WILL NOT BLOCK OR HIT MACHINE!
- LOWER OVERALL HEIGHT PROVIDES MORE SPACE FOR HEAVY CUTTING STABLITY AND BIGGER WORKPIECE!
- TILTING STRUCTURE HAS STRONG TIGHTENING DESIGN.
- ALL FUNCTION SAME AS VH SERIES. EXCEPT THE TILTING STRUCTURE.

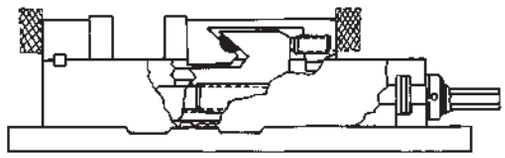
ORDER NO	A	B	C OPEN	D	E	F	G	H	i	j	Max. Clamp Force	K MAX. degree	G.W. (kgs)	CODE NO.
VHT-4U	653	36	170	ø162	165	104	169	263	141	80	3750kgs	90º	37.39	1002-025
VHT-6U	942	51	300	ø242	231	145	196	380	199	125	5250kgs	90º	93.96	1002-026

Ang-Fixed Milling Vise

VD-675, VA-8L is NEW
VD-675 6″ opened 7 1/2″
VA-8L 8″ opened 10 1/4″

VA-8L





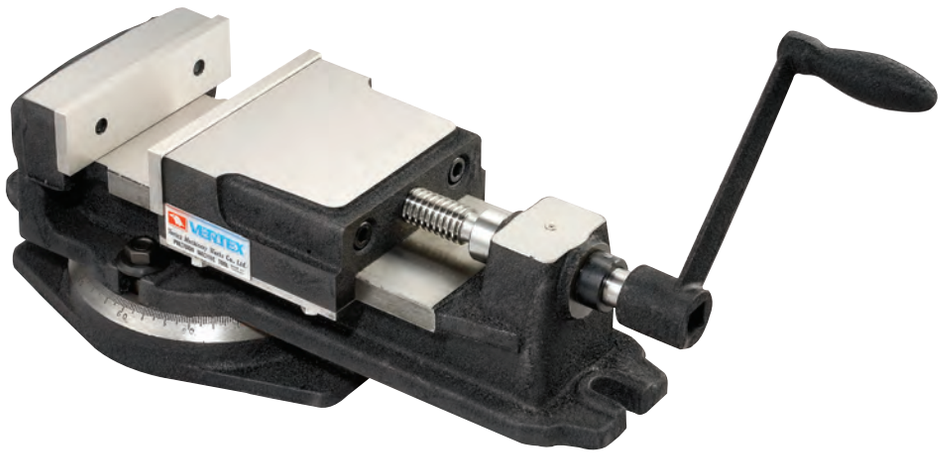
- The enclosed lead screw and sliding surface are harden and ground.
- Highest clamping power. It's very accurate and durable.
- This Vise is so designed that the horizontal Force generated by tightening the handle pushes the semisphere within the movable jaw and thus thrusts the movable jaw downward.
- There fore, the workpiece does not lift, even if it is held at the top of the jaw plates.
- Four setting positions of the jaw plates are available, widening the jaw plates opening.
- The new VD675, VA-8L have two major improvments: a wide opening jaw and a new stationary jaw that features an integral key larger fasteners which reduce deflectionby 50%
- ACCURACE WITHIN 0.02mm

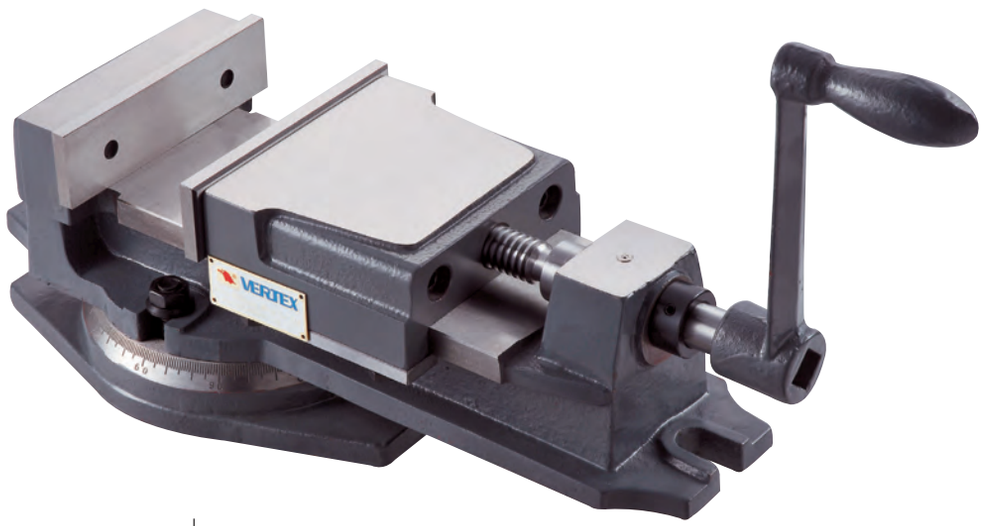
Order No. & Dimensions

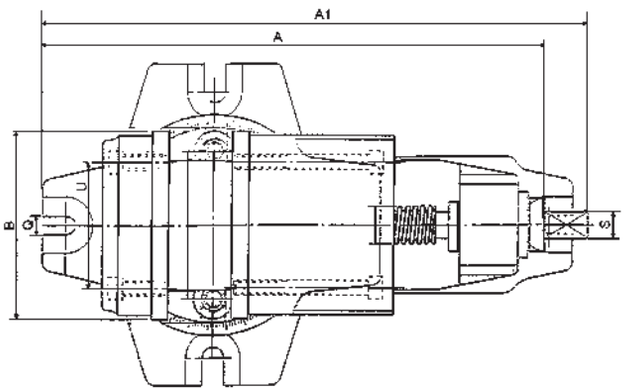
Unit:mm/inches

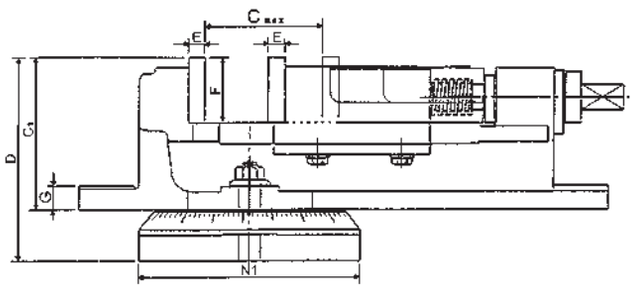
ORDER NO.	Ⓐ	Ⓑ	Ⓒ OPEN	a	k	c	d	e	f	Max. Clamp Force	Gross weight kg		Meas. CFT	CODE NO.
											plain	with swivel base		
VA-4	102 4 1/64	36 1 27/64	103 4 1/16	325 12 13/16	165 6 1/2	96 3 25/32	243 9 9/16	31 1 7/32	6 1/4	1500kgs	16 36	(C)20.4	0.5	1002-030
VA-5	131 5 5/32	36 1 13/32	110 4 21/64	357 14 1/16	193 7 5/8	101 3 31/32	278 11	32 1 3/4	7 5/16	2000kgs	25 55	(C)29.7	0.9	1002-031
VA-6	152 6	46 2	142 5 9/32	418 16 7/16	209 8 1/4	119 4 11/16	328 12 29/32	39 1 17/32	9 3/8	2500kgs	36 80	(C)42.6	1.5	1002-032
VA-8	200 7 7/8	62 2 7/16	197 7 3/4	548 21 9/16	295 11 5/8	147 5 13/16	416 16 3/8	45 1 25/32	11 7/16	3000kgs	70 155	(W)80.8	2.7	1002-033
VD-675	152 6	38 1 1/2	190 7 1/2	552 21 3/4	295 11 5/8	134 5 5/16	381 15	47 1 7/8	11 7/16		37 82	(C)45.6	1.5	1002-034
VA-8L	200 7 7/8	64 2 7/16	260 10 1/4	510 20 3/4	245 9 9/16	156 6 1/8	370 14 9/16	47 1 7/8			72 155	(W)71.6	2.7	1002-035

K-Type Milling Vise









- It's a practical piece of equipment with excellent precision and a high quality finished.
- Body, movable jaw and swivel base made of closes-grained high tensile iron castings. Built for heavy duty machining and retained accuracy.
- Jaw plates were made of hardened and grounded tool steel.
- It's the most suitable for the Milling, Grinding and Drilling.
- ACCURACE WITHIN 0.02mm

Order No. & Dimensions

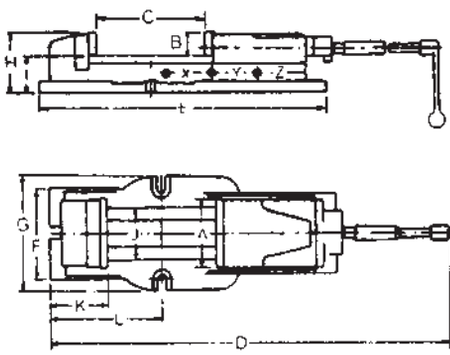
Unit:mm

ORDER NO.	A	A1	B	C OPEN	C_1	D	E	F	G	N1	Q	S□	U	Max. Clamp Force	G.W. (kg)	Meas CFT	CODE NO.
VK-4	280	310	104	62	84	114	10	36	14	123	12	15	68	900kgs	(C)10	0.2	1002-040
VK-5	350	390	131	85	98	130	10	36	15	148	14	15	80	900kgs	(C)16.6	0.5	1002.041
VK-6	418	470	152	112	107	148	10	42	17	182	14	15.5	90	1000kgs	(C)27.8	1.1	1002-042
VK-8	548	609	204	150	148	191	12.5	62	20	233	20	21	120	1400kgs	(C)56	1.5	1002-043

Super Open Vise

MECHANICAL TYPE

VJ-600



EXCEPT THE HYDRAULIC SYSTEM,
THE FEATURE IS SAME AS VH-TYPE
ACCURACE WITHIN 0.02mm

VJ-400 JAW OPENED 180mm
VJ-500 JAW OPENED 230mm
VJ-600 JAW OPENED 300mm

Order No. & Dimensions

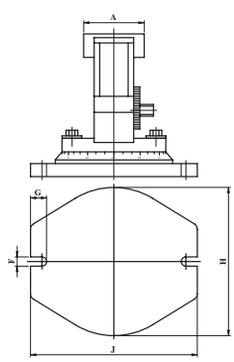
Unit:mm

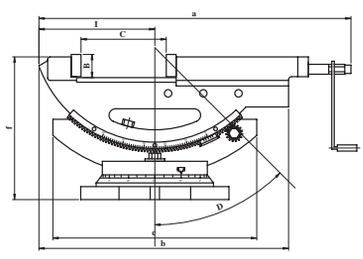
ORDER NO.	A	B	C OPEN	D	E	F	G	H	I	J	K	L	Max. Clamp Force	G.W. (kg)	Meas CFT	CODE NO.
VJ-400	110	37	180	522	440	133	168	94	58	80	97	150	1500 kgs	(C) 24.8	0.8	1002-050
VJ-500	130	48	230	580	455	168	192	114	65	97	75	157	1500 kgs	(C) 33.4	1.5	1002-051
VJ-600	154	54	300	695	540	186	200	131	78	116	90	182	1500 kgs	(C) 46.1	2.2	1002-052

2-Way Angle Milling Vise

VWT-4B

VWT-6B





EXCEPT THE HYDRAULIC SYSTEM,
THE FEATURE IS SAME AS VHT-TYPE

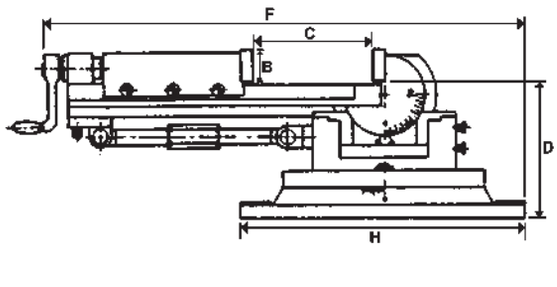
VWT-4B JAW OPENED 220mm
VWT-6B JAW OPENED 350mm

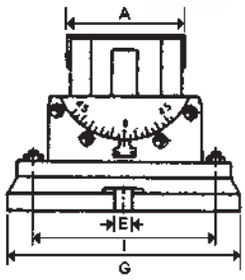
Order No. & Dimensions

Unit:mm

ORDER NO.	A	B	C OPEN	D	E	F	G	H	J	a	b	c	f	Max. Clamp Force	G.W. (kg)	Meas CFT	CODE NO.
VWT-4B	110	36	220	50	15	15	26	240	270	500	404	335	230	1200 kgs	(C) 33.3	1.2	1002-060B
VWT-6B	154	54	350	50	20	19	28	300	330	800	585	415	290	1600 kgs	(W) 79.7	4.4	1002-061B

3-Way Angle Milling Vise





- Angles can be set in 3 dimensions. Swivels 360º around base. The vise can be elevated through 90º from the horizontal to vertical. And also can be tilted on its lower angle base up to 45º in both right and left.
- Tilting of any angle all keep the workpiece steady, smooth.
- Particually the clamping part of screw is strengthened by a bush made of gunmetal.

Specifications

Unit:mm

ORDER NO.	A	B	C OPEN	D	E	F	G	H	I	Total Height	Max. Clamp Force	Gross Weight kg	Meas CFT	CODE NO.
VW-3	81	30	80	127	14	400	185	240	130	475	800kgs	(C)16.7	0.7	1002-080
VW-4	110	37	116	145	16	535	238	317	180	595	1000kgs	(C)32.7	1.2	1002-081
VW-5	135	37	145	167	18	620	270	357	210	690	1600kgs	(W)49.4	1.6	1002-082

2-Way Machine Vise

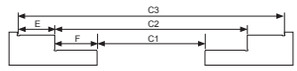
- Heavy cast iron structure
- Scales in both axis
- 360º swivel around Z-axis
- 90º vertical and horizontal swivel

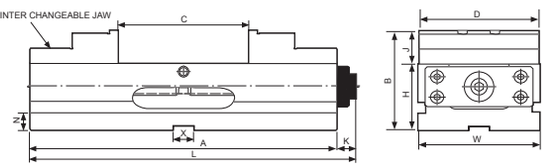
Specifications

Unit:mm

ORDER NO.	Jaw		C Max. open	Alignment slot	Height	L x W x H (OVERALL)	Max. Clamp Force	Weight (kgs)	Packing	CODE NO.
	Width	Height								
VWT-5	125	46	100	16	160mm	410x315x160	900kgs	31.7	432x330x190	1002-090
VWT-6A	160	51	120	16	195mm	430x320x195	1600kgs	47	510x365x240	1002-091

Self Centering Vise





- Suit for 4/5 axis CNC machine
- Repeat clamping tolerance ±0.01mm
- Material: FCD60, high tenison cast iron
  Slide way hardness: HRC 45º
- Inter changeable jaw: heat treatment HRC 55º
- Lock down-drawing force: keep work piece from lifting

Specifications

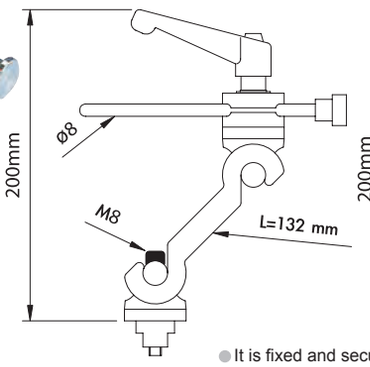
Unit:mm

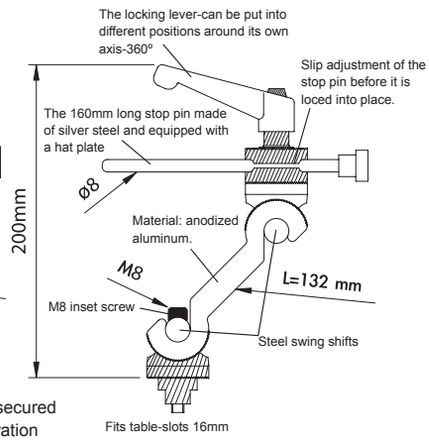
ORDER NO.	A	B	C OPEN	CLAMPING CAPACITY			D	E	F	H	J	K	N	X	CODE NO.
				C1	C2	C3									
VCV-1090	240	120	90	90	70-160	134-222	100	31	35	80	40	20	22	18	1002-108

U/N Work Stopper

NON TEETH TYPE
ORDER NO. VWS-123
CODE NO. 1002-105
WEIGHT: 0.9kg
T-SLOT: 16mm

ORDER NO. VWS-125
CODE NO. 1002-106
WEIGHT: 1.1kg
T-SLOT: 16mm



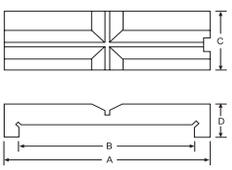


- It is fixed and secured by its rigid serration without skid.
  (300kg bump is pemanent)

Universal Vise Jaws With Work Stopper

ORDER NO. VWSJ-4, 5, 6, 8

- Can be fixed on any vise jaw by the two screws on the side.
- One jaw in muitiple- function features.
- V-type jaw can fix workpiece at horizontal and vertical position.
- Can be performed as work stopper.
- Quick, save your time.



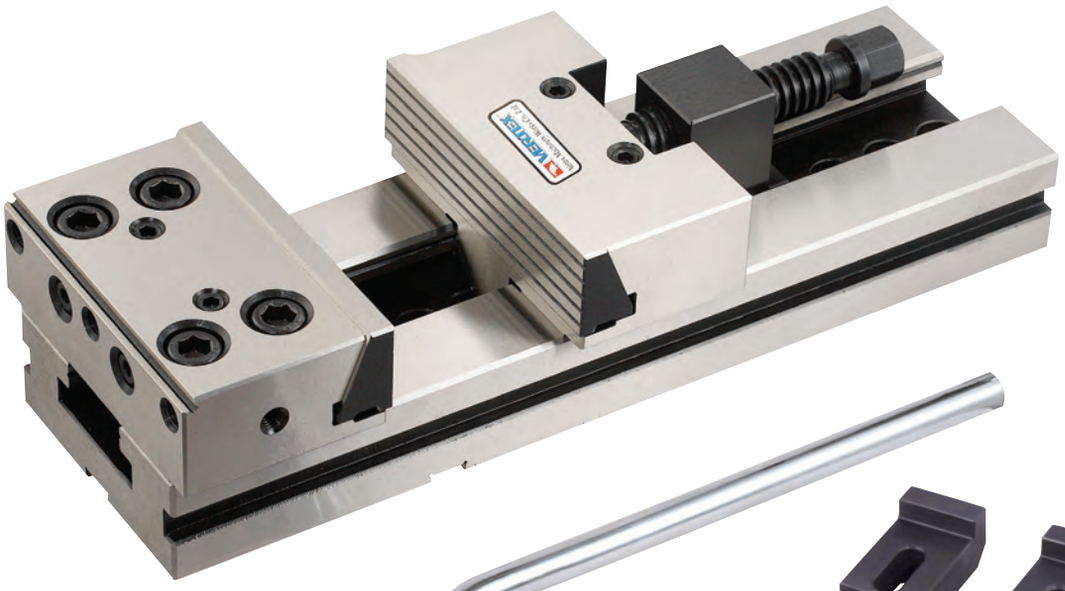
4 FOR THE JAW WIDTH 100-105m/m
5 FOR THE JAW WIDTH 125-130m/m
6 FOR THE JAW WIDTH 150-160m/m
8 FOR THE JAW WIDTH 200-210m/m

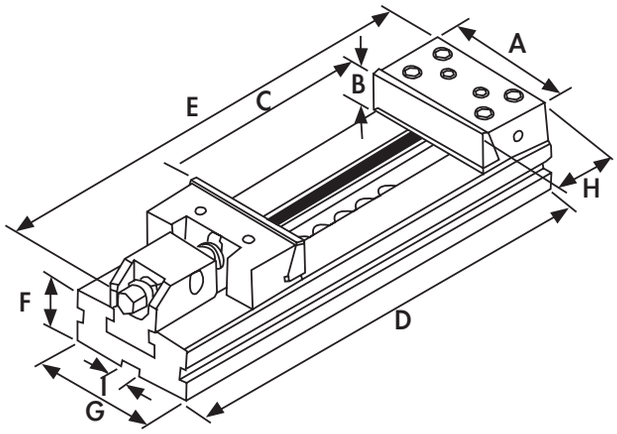
ORDER NO.
VWSJ-□———VISE JAW SIZE
(Unit:inch)

Unit:mm

ORDER NO.	A	B	C	D	WEIGHT kgs	CODE NO.
VWSJ-4	145	110	49	38	1.6	1002-170
VWSJ-5	175	140	49	39	1.7	1002-171
VWSJ-6	190	160	53	40	2	1002-172
VWSJ-8	245	210	76	42	4.2	1002-173

Modular Precision Machine Vises





Features

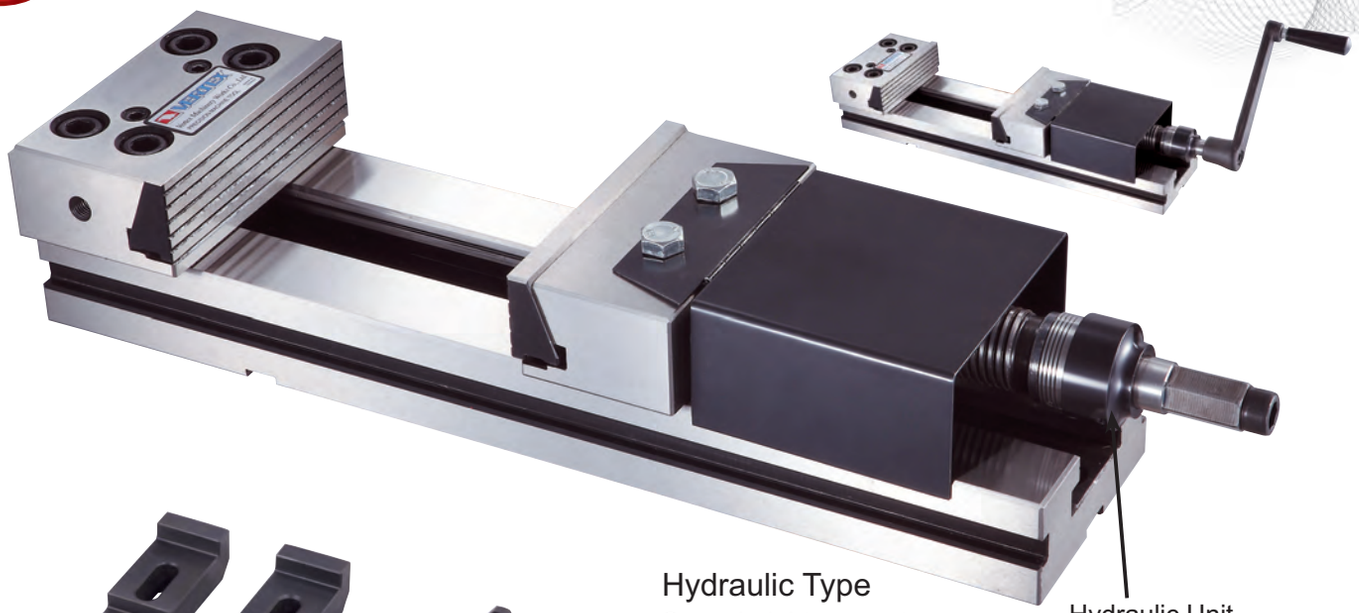
- High Accuracy 0.01/100 m/m
- Unlimited Clamping Range
- High Quality Alloy Steel with HRC 59
- High Clamping Pressure
- EACH ONE IS SAME AS HEIGHT.
- CAN BE USED IN MULTIPLE STYLE.
- No Length of Height Limitation
- No Jaw Lift
- Low Profile
- All Vises are Matched parallelism ±0.01/100 m/m
- Optional=Swivel base

ORDER NO.	VMP -4	VMP -5	VMP -6	VMP -6B	VMP -6C	VMP -7A	VMP -7B	VMP -7C	VMP -8A	VMP -8B	VMP -8C	VMP -8D	VMP -12C	VMP -12E
A	100	125	150	150	150	175	175	175	200	200	200	200	300	300
B	30	40	50	50	50	60	60	60	65	65	65	65	80	80
C OPEN	100	150	200	300	400	200	300	400	200	300	400	500	400	600
D	270	345	420	520	620	455	555	655	573	595	695	795	735	935
E	325	146	530	600	700	620	620	620	718	718	718	880	830	1030
F	35	40	50	50	50	58	58	58	70	70	70	70	78	78
G	75	96	125	125	125	145	145	145	170	170	170	170	195	195
H	78	78	90	89.4	89.4	97	97	97	114	114	114	113.4	120.4	120.4
I	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Max. Clamp Force		1300 kgs	2000 kgs						2000 kgs	2000 kgs				
KG	9.2	16	28.5	34.8	38.1	43.7	48.3	53.5	66.3	73.2	81.3	87.2	125	143
CODE NO.	1002 -190	1002 -191	1002 -192	1002 -201	1002 -202	1002 -193	1002 -194	1002 -195	1002 -196	1002 -197	1002 -198	1002 -203	1002 -204	1002 -205

Modular Precision Hydraulic Machine Vises

PAT NO. 98202966

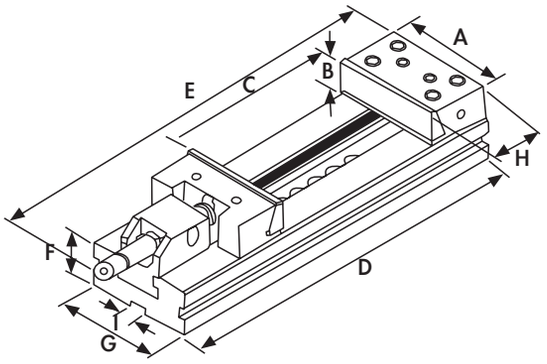
NEW



Hydraulic Type

Same height guarantee

Hydraulic Unit



Features

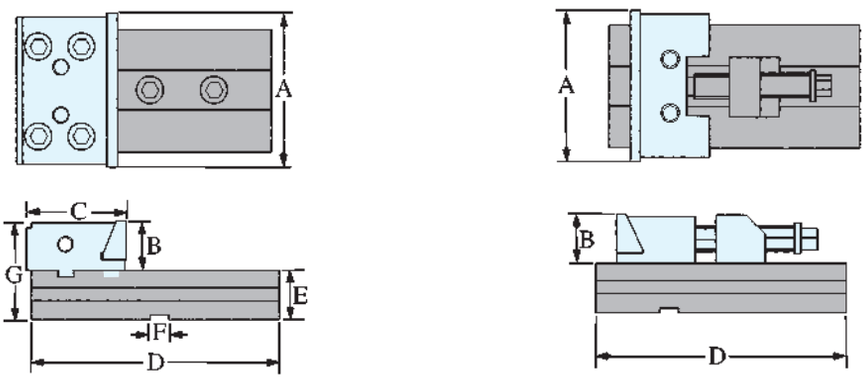
- New design: Adjustable pressure device.
- Suit for processing of brass, AL, plastic, steel.
- New design: super open jaw size, smallest open jaw size. lock proof system: prevent wrong clamping force stucks the vise.
- Hydraulic clamping force 4500kg for heavy duty cutting. The screw mechanism type clamping force is 2200 kgs
- Smooth & light operation for the handle.
- High accuracy 0.01/100 m/m
- Unlimited clamping range
- High quality alloy steel with HRC 59
- High clamping pressure
- Eachone is same as height.
- Can be used in multiple style.
- No length of height limitation
- No jaw lift
- Low profile
- All vises are matched parallelism ±0.01/100 m/m

ORDER NO.	VMP -6BH	VMP -6CH	VMP -7AH	VMP -7BH	VMP -7CH	VMP -8AH	VMP -8BH	VMP -8CH	VMP -8DH	VMP-12CH	VMP -12EH
A	150	150	175	175	175	200	200	200	200	300	300
B	50	50	60	60	60	65	65	65	65	80	80
C OPEN	300	400	200	300	400	200	300	400	500	400	600
D	520	620	455	555	655	573	595	695	795	735	935
E	660	760	680	680	680	778	778	778	940	890	1090
F	50	50	58	58	58	70	70	70	70	78	78
G	125	125	145	145	145	170	170	170	170	195	195
H	89.4	89.4	97	97	97	114	114	114	113.4	120.4	120.4
I	16	16	16	16	16	16	16	16	16	16	16
Max. Clamp Force											
KG	29	33	38	43	48	65	69	74	79	115	135
CODE NO.	1002-201H	1002-202H	1002-193H	1002-194H	1002-195H	1002-196H	1002-197H	1002-198H	1002-203H	1002-204H	1002-205H

Modular Machine Free Vise

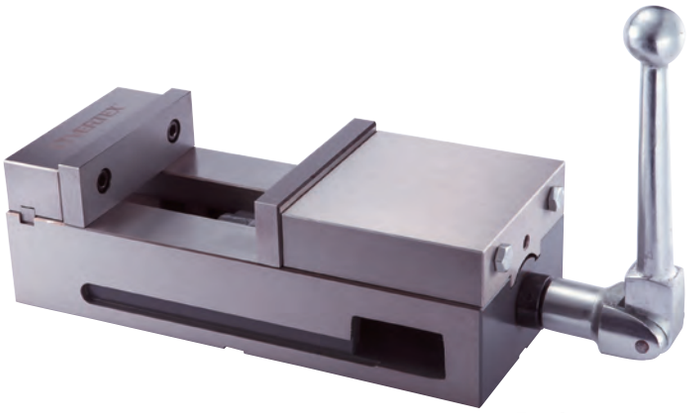
MODULAR VISES are manufactured under rigid quality control. Only the most suitable materials are used, and the accuracy of even the smallest components is assured. As a result of the high standard construction MODULAR VISES can be depended upon to maintain their accuracy under the most severe operating conditions.

Free head stock & fixed stock can for large wider workpiece use.



ORDER NO.	VMP-4L	VMP-5L	VMP-6L	VMP-7L
A	100	125	150	175
B	30	40	50	60
C	78	78	90	97
D	140	160	230	240
E	35	40	50	58
F	16	16	16	16
G	65	80	100	118
KG	8.5	14.5	30.1	42.4
CODE NO.	1002-206	1002-207	1002-208	1002-209

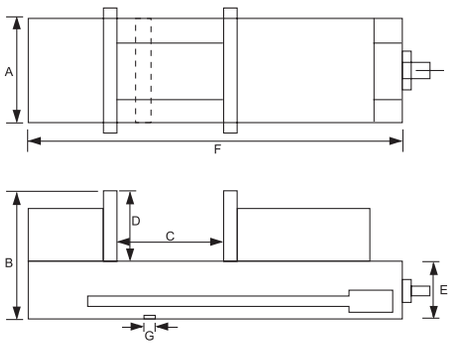
Lock-Fixed II Precision Machine Vise

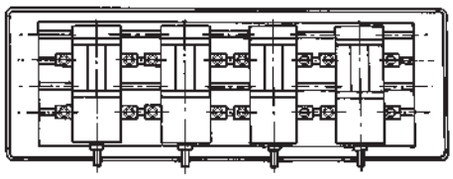


ORDER NO.
VMC-4
VMC-6

Performed sided vertically.

- With the ability of lock-fixed III 2, 3, 4, 5.
- Use the semi-sphere segment principle.
- When operate several vises (in a row) put on one
- machine bed, the operating situation is showed as below:



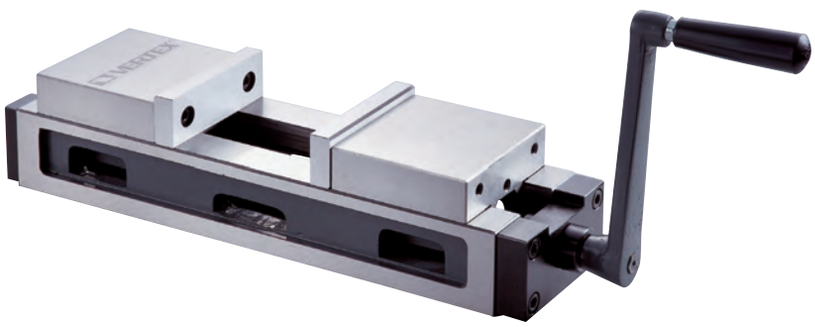


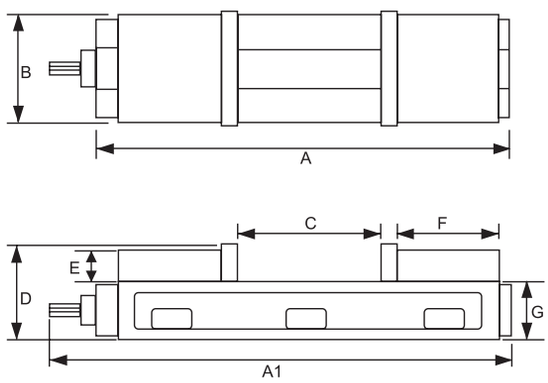
Performed jointly.

ORDER NO.	A	B	C OPEN	D	E	F	G	Max. Clamp Force	MEAS CUFT	WEIGHT (kg)	CODE NO.
VMC-4	108	100	100	37	63	285	16	1500kgs	0.4	14.2	1002-185
VMC-6	156	120	142	46	74	368	16	2500kgs	1.1	29.8	1002-186

Compound Precision Vise

NEW





- Self centering. Suit for rough or irregular workpiece.
- Compact design
- High Accuracy
- Super open capacity
- Suitable for irregular workpiece.
  Rapid and convenient centralizing.

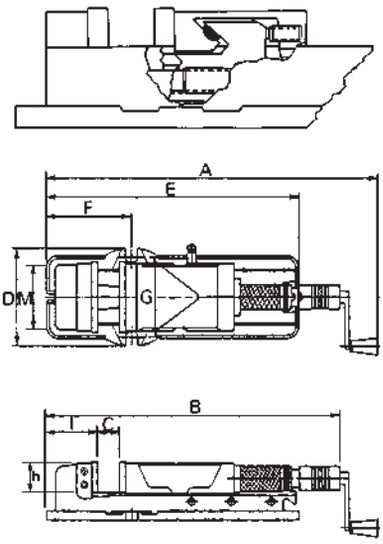
ORDER NO.	A	A1	B	C OPEN	D	E	F	G	Max. Clamp Force	kgs	CODE NO.
VCV-44	415	462	102	195	95	30	102	60		17.7	1002-240

Hydraulic Machine Vise

Build Out Type

Features

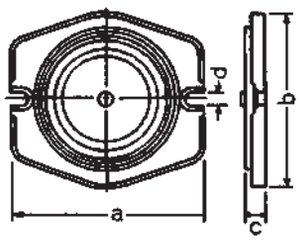
- Rigid material-vise body of ductile iron FCD 60JIS (equal to GGG 60) with 60 kgs/mm² or 80,000 psi tensile strength.
- Vise bed flame hardened to HRC 45 and up, takes up wear and maintain accuracy for long.
- For multiple use plural vises are available on tolerance of 0.01mm in the height of vise bed and in alignment of the clamping surface of the vise jaw at extra cost.
- Mechanicl/hydraulic spindle without original clutch mechanise.
- Down thrust “Semi-sphere Segment” mechanism-eliminates jaw lifting and work flitting.
- All surface ground.



Unit:mm

ORDER NO.	A	B	C OPEN	D	E	F	G	I	M	h	CLAMPING FORCE	N.W. kgs	CODE NO.
VHO-5	695 920	570 795	0-220	190	505	180	160	105	130	55	3500kg	36.5	1002-220
VHO-6	750 1060	625 935	0-300	240	625	208	196	125	160	58	4000kg	59.1	1002-221
VHO-8	830 1140	725 1035	0-310	280	700	265	240	165	200	63	6000kg	94.3	1002-228

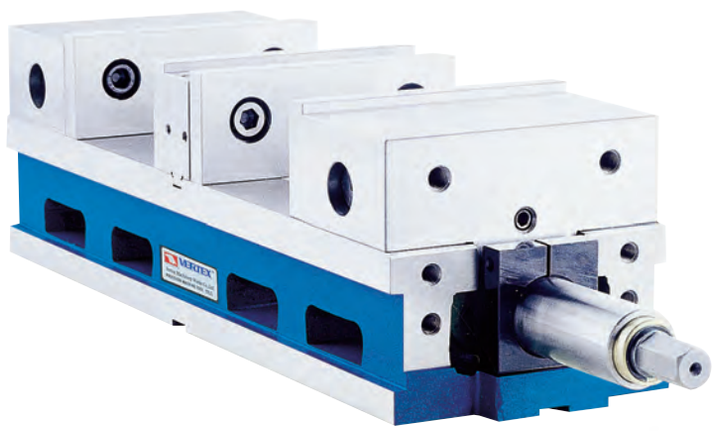
Swivel Base Optional



ORDER NO.	A	B	C	D	N.W. kgs	CODE NO.
HSO-5	285	263	35	16	12.5	1002-222
HSO-6	330	320	40	18	16.5	1002-223
HSO-8	415	413	50	21	35	1002-229

Double Clamp Vise

NEW DESIGN & UNIQUE CONSTRUCTION.
EXCLUSIVELY DESIGNED WITH COMBINATION OF MACHINABLE FIXTURE JAWS AND HARD JAWS

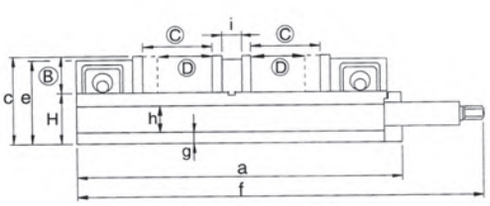


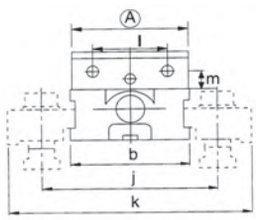
HIGH & EXCELLENT RIGIDITY.

The vise is made of FCD. 80000 PSI (55 kg/cm²) Ductile iron, and the slide ways are hardened to HRC45. The rigid construction prevents the base from distortion.
Precision made to high accuracy standard.

- The movable jaws provide alignment to workpiece without jaw liftting.
- The height of jaw plate is 30% higher than the other vise with the same size.
- There are 6 kinds of clamping ways to meet workpieces of different shapes and sizes.

DOUBLE CLAMP SEAT:
One handle can simultaneously operate two movable jaws and clamps 2 pieces of workpiece of same size or different size or one large workpiece. This model can increase efficiency and productivity of CNC machine.





Unit:mm

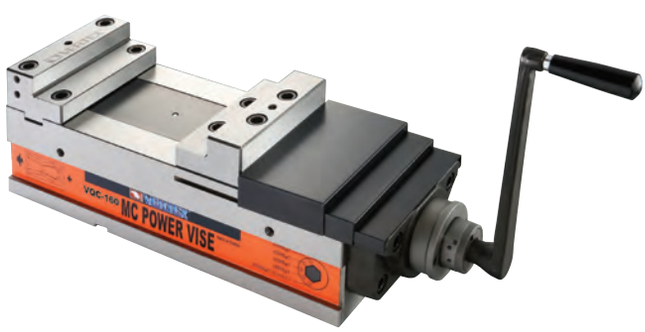
ORDER NO.	A	B	C OPEN	D	a	b	c	H	e	f	g	h	i	j	k	l	m	Guide Block	Max. Clamp Force	Weight (kgs)	CODE NO.
VMC-6D	152	58	34-102	0-68	495	154	140	90	135	610	18	46	30	165	220	98.4	31.8	18		62.1	4005-021

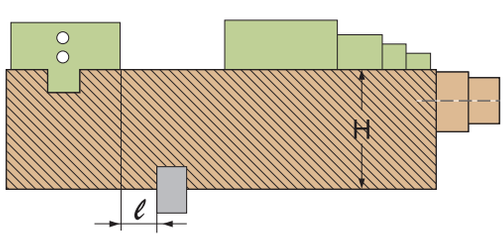
MC Power Vise

NEW

Great Capacity, Wide Clamping Range
Constant Full Length

- **Ultra clamping length more than other VMC-vise**
- Big jaw opening.
- Easy operation, compact design.
- Even if the jaw is opened, it does not interfere with the cover of the mounting machine.
- Quick set up, time saving.
- When jaw is opened, it is not affect mounting machine's cover.





H-Accurance 0.01mm
ℓ-Accurance 0.01mm

SAME HEIGHT GUARANTEE

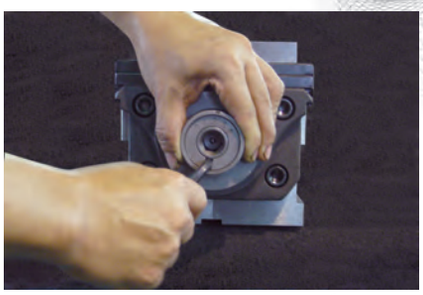
Flexible Clamp System

- High precision system keep the dimension tolerance within 0.01/100mm.
- Vise clamps long size workpieces securely & steady.
- High Accurate System: tolerance within 0.01/100mm.
- VQC Vise can hold long workpiece tight and fixed.

MC Power Vise

High power & fine balanced body structure stable clamping force

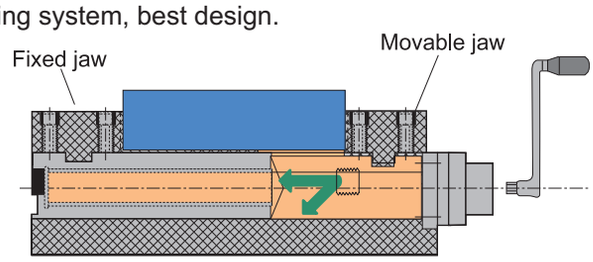
- The clamping force can be easily adjusted due to the preset mechanism.
- Mechanical type toggle enhancement mechanism.
- Clamping force can adjust to suit for different material, such as steel, brass and aluminum.
- Clamping force can be adjusted for customer's requirement.
- Adjustable clamping force device.



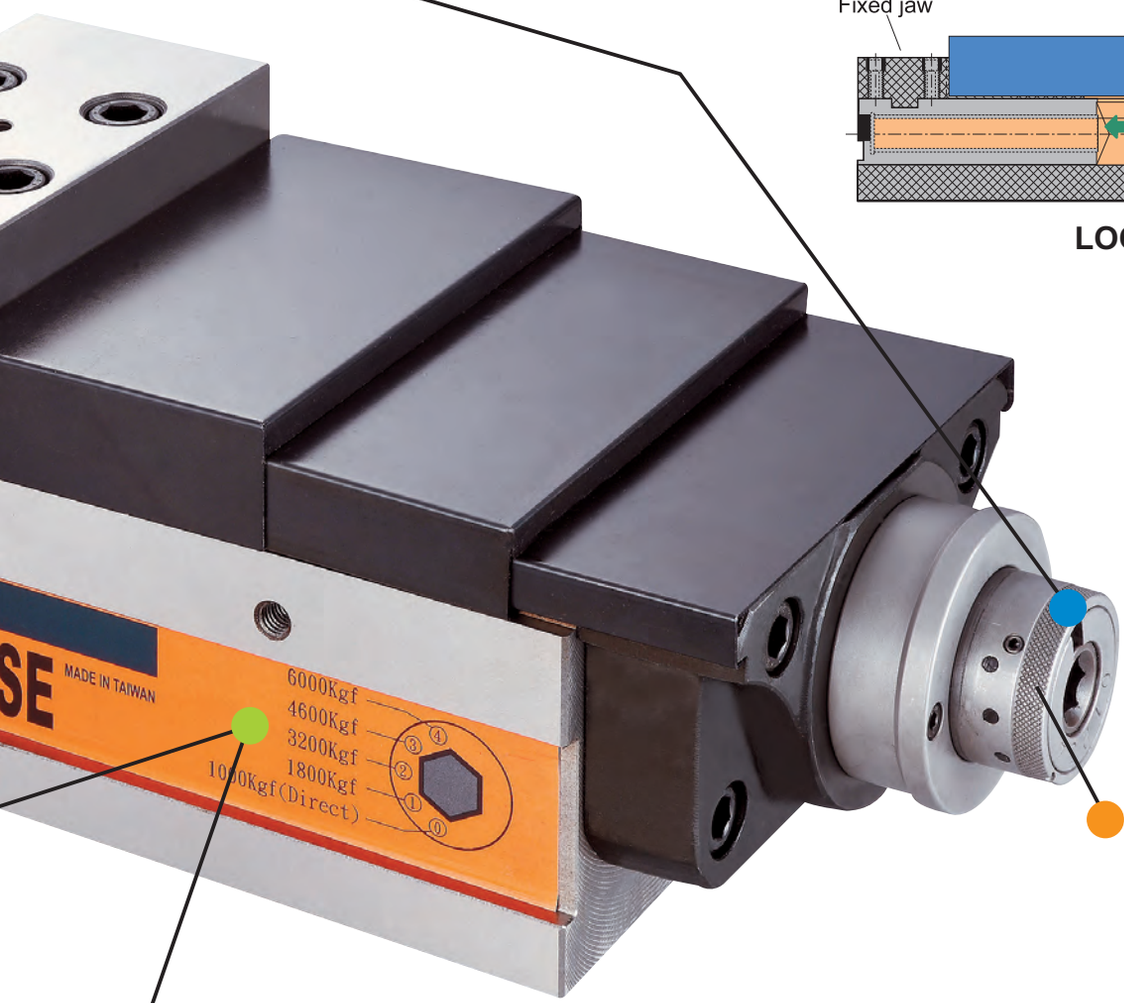
How to adjust the clamping force

MC Power vises guarantee the lifting of workpiece is within of 0.02/100mm.

- Adapt a blinding beam system with workpiece lift.
- Prevention mechanism. Pull-in efect.
- Adapt a lift preventing system, best design.



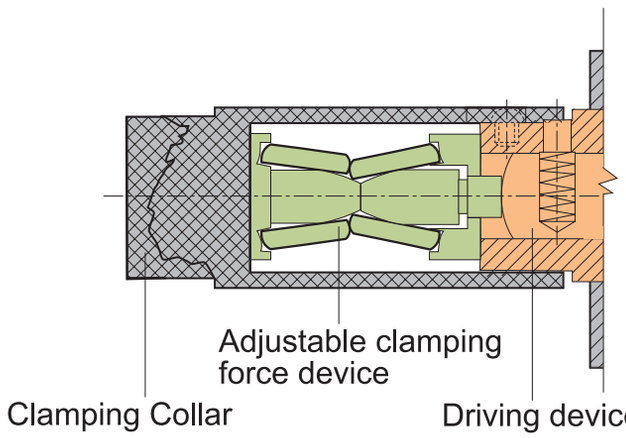
LOCK DOWN DESIGN



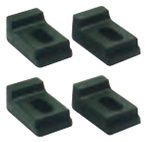
CLAMPING FORCE ADJUSTABLE DESIGN From 1800 kgf to 6000 Kgf

Toggle joint device mechanism.

- **One of the best vise mechanism design**
- After the moveble jaw touch,turning the handle, only the drive shaft is transmitted to the enhancement process of toggle joint device mechanism unit and the movable jaw clamps the work through the clamp spindle at the preset force.
- Clamp work piece, keep turning the handle, until the motion stop which means VQC mechanism has lock workpiece in the pre-set force.



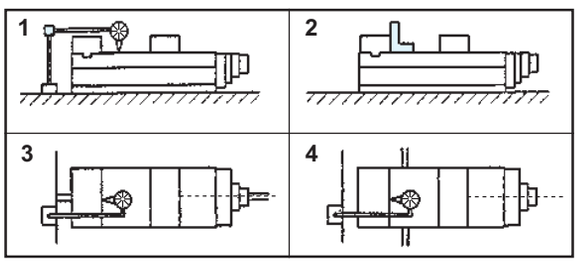
MC Power Vise



TOGGLE JOINT MECHANISM DESIGN FOR HEAVY DUTY WORKING

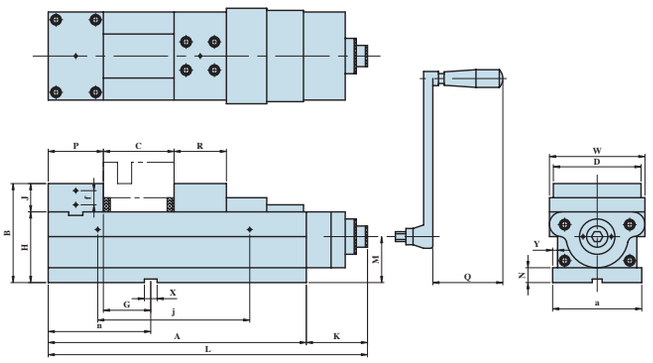
Features

- Compact design. Great clamping capacity & rigid.
- “Toggle joint mechanism”. Provides a steady clamping force against shocks and vibrations during the operatioons, since it clamps the workpiece resiliently with an aid of the “disc-springs” mounted inside.
- Strong clamping force.
- Large jaw stroke range.
- Exclusive Power Vise provide same height same position for horizontal and vertical MC, NC, Machine.
- Body is made of FCD60 high quaility ductile cast iron, resists deflection or bending.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Quick of clamping & locking and easy of operation.



INSPECTION SPECIFICATION

NO.	Inspection Item Per (100mm)	Guaranteed
1	Parallelism: running face to bottom of bed.	0.01/100mm
2	Squareness :between running face and jaw plate.	0.02/100mm
3	Squareness: keways on bottom of bed to jaw plate.	0.02/100mm
4	Parallelism: running face of the test block to bottom of bed.	0.02/100mm



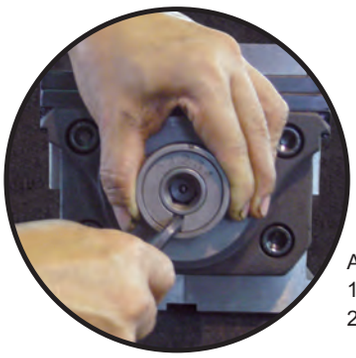
CLAMPING CAPACITY

ORDER NO.	JAW H	JAW Open C	H	MAX. Clamping Force (KN)	G.W. kg
VQC-125	40	205	140	40	40.4
VQC-160	45	275	165	60	72.3
VQC-160L	45	355	165	60	78.6
VQC-200L	70	405	190	60	108

ORDER NO.	A	B	a	D	P	R	G	H	J	K	L
VQC-125	366	140	126	124.5	78	74	66	100	40	86	452
VQC-160	456	165	161	159.5	86	86	58	120	45	98	554
VQC-160L	536	160	162	160	86	86	58	115	45	98	634
VQC-200L	616	180	202	200	102	98	74	110	70	95	711

ORDER NO.	M	N	Q	W	X	Y	C OPEN	f	j	n	CODE NO.
VQC-125	65	21	74	135	18	7	205	20	216	145	4005-005
VQC-160	78	21	94	170	18	7	275	20	286	145	4005-006
VQC-160L	78	21	94	174	18	7	355	20	286	145	4005-007
VQC-200L	75	21	96	217	18	7	405	20	386	177	4005-008

MC Power Vise



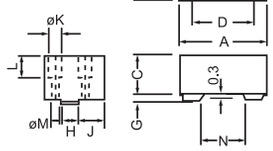
ADJUSTING METHOD
1. FIXED COLLAR
2. TURN BY WENCH TO GET NO.
   0, 1, 2, 3, 4. TO HAVE CLAMPING FORCE

CLAMPING FORCE CHART

SCALE / ORDER NO. / KN	4	3	2	1	0
VQC-125	-	40KN	28KN	16KN	8KN
VQC-160	60KN	46KN	32KN	18KN	10KN
VQC-160L	60KN	45KN	32KN	20KN	10KN
VQC-200L	60KN	45KN	32KN	20KN	10KN

OPTIONAL: Soft jaw for different shape workpiece FJ & MJ can for cutting

FJ

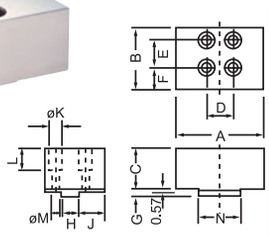


Fixed side

FIXED JAW

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	CODE NO.
VQC-125FJ	124.5	91	60	88	45	29.5	8	24	40	19	33.5	13	63	4005-014
VQC-160FJ	159.5	102	60	124	50	34	9	28	45	22	30	15	84	4005-015
VQC-160L-FJ	159.5	102	60	124	50	34	9	28	45	22	30	15	84	4005-016
VQC-200L-FJ	200	122	75	140	62	40	9	28	57	25	37	17	100	4005-016A

MJ



Movable side

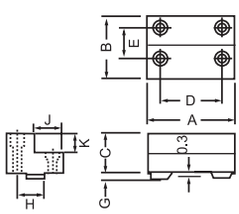
MOVEABLE JAW

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	CODE NO.
VQC-125MJ	124.5	87	60	35	42	29	8	24	38	19	33.5	13	59.5	4005-017
VQC-160MJ	159.5	102	60	56	50	34	9	28	45	22	30	15	80.5	4005-018
VQC-160L-MJ	159.5	102	60	56	50	34	9	28	45	22	30	15	80.5	4005-019
VQC-200L-MJ	200	117	75	62	59	39	9	28	54.5	25	37	17	95	4005-019A

VISE JAWS CAN TURN 180º FOR YOUR REQUIREMENT.

OPTIONAL: Hard jaw for thin type workpiece

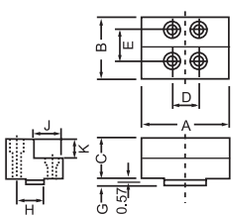
FJL



L TYPE FIXED JAW

ORDER NO.	A	B	C	D	E	G	H	J	K	CODE NO.
VQC-125FJL	124.5	78	40	88	45	8	24	39	20	4005-008A
VQC-160FJL	159.5	86	50	124	50	9	28	43	25	4005-009
VQC-160L-FJL	159.5	86	50	124	50	9	28	43	25	4005-010
VQC-200L-FJL	200	102	70	140	62	9	28	51	35	4005-010A

MJL

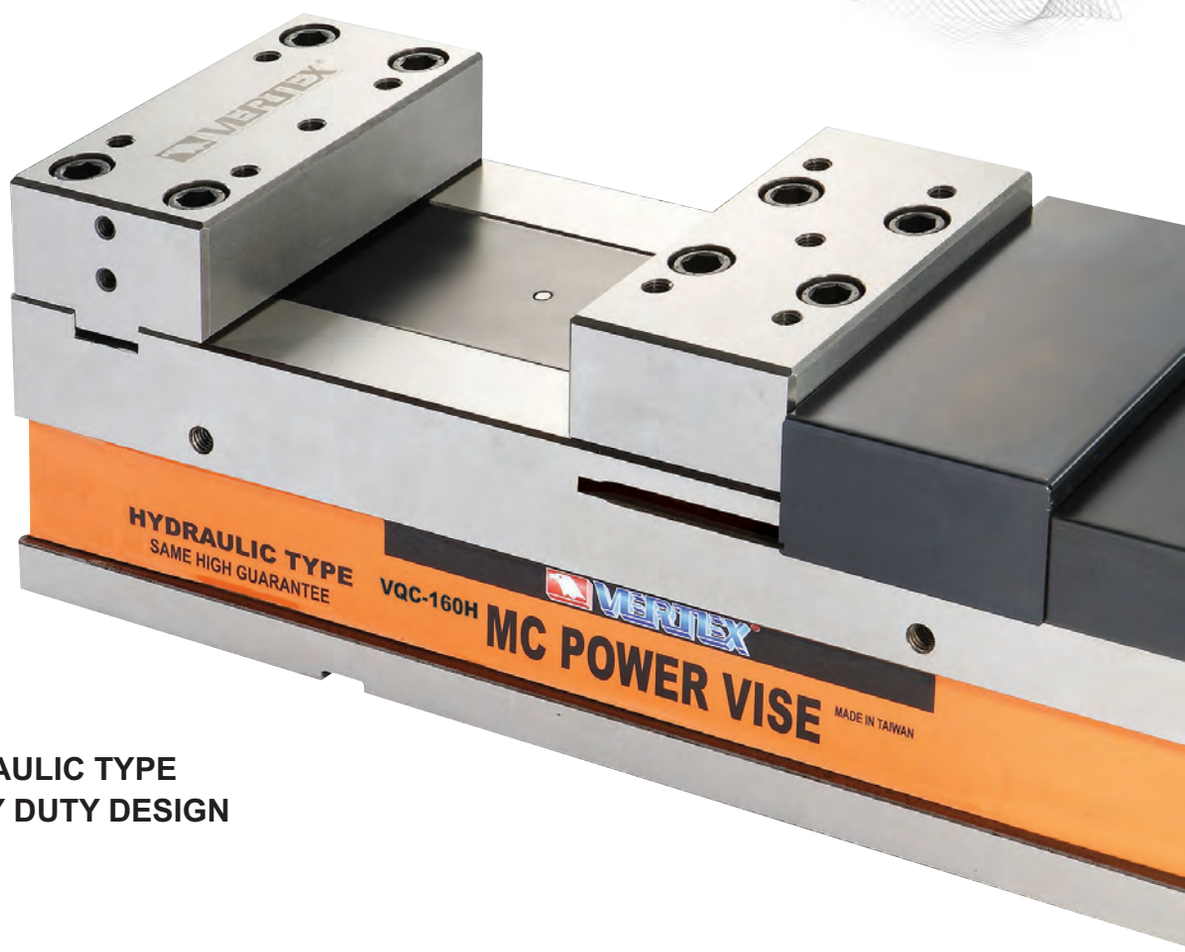


L TYPE MOVEABLE JAW

ORDER NO.	A	B	C	D	E	G	H	J	K	CODE NO.
VQC-125MJL	124.5	74	40	35	42	8	24	37	20	4005-011
VQC-160MJL	159.5	86	50	56	50	9	28	43	25	4005-012
VQC-160L-MJL	159.5	86	50	56	50	9	28	43	25	4005-013
VQC-200L-MJL	200	98	70	62	59	9	28	49	35	4005-013A

MC Power Vise Hydraulic Type

NEW

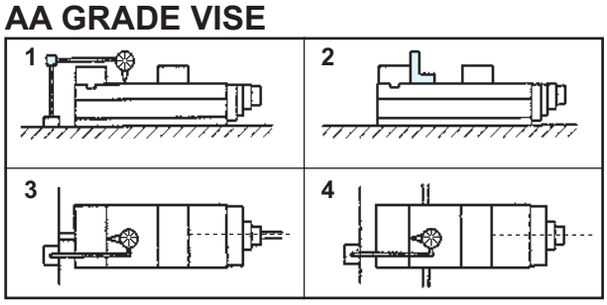


HYDRAULIC TYPE
HEAVY DUTY DESIGN

Features

- Compact design. Great clamping capacity & rigid. Light & smooth operation.
- Constructed for milling, drilling, machining center, grinding and many other machine shop applications.
- Body is made of FCD60 ductile cast iron, HIGH deflection/bending resistant.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Hydra-booster system for maximum clamping pressure with minimum force.
- Quick of clamping & locking and easy of operation.
- Accuracy within 0.01/100mm.
- Hydra-booster system is guaranteed for using 2 years limited.
- The hydraulic oil number is 68#

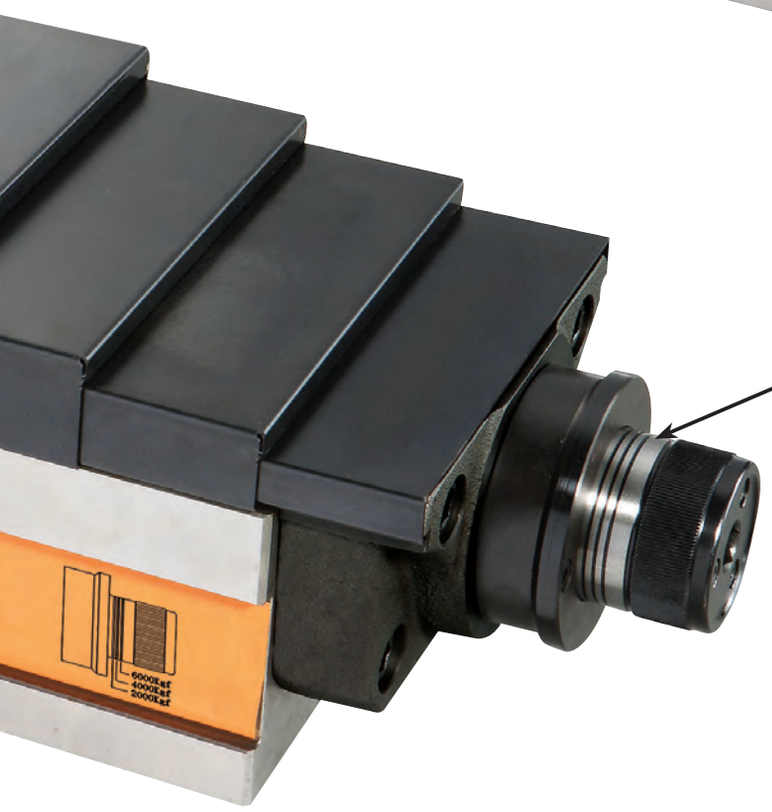
AA GRADE VISE



INSPECTION SPECIFICATION

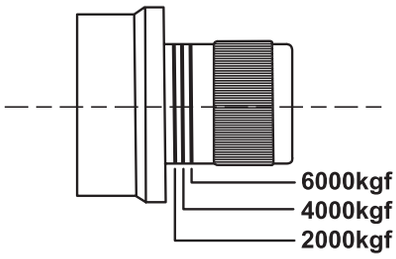
NO.	Inspection Item Per (100mm)	Guaranteed
1	Parallelism: running face to bottom of bed.	0.01/100mm
2	Squareness :between running face and jaw plate.	0.02/100mm
3	Squareness: keways on bottom of bed to jaw plate.	0.02/100mm
4	Parallelism: running face of the test block to bottom of bed.	0.02/100mm

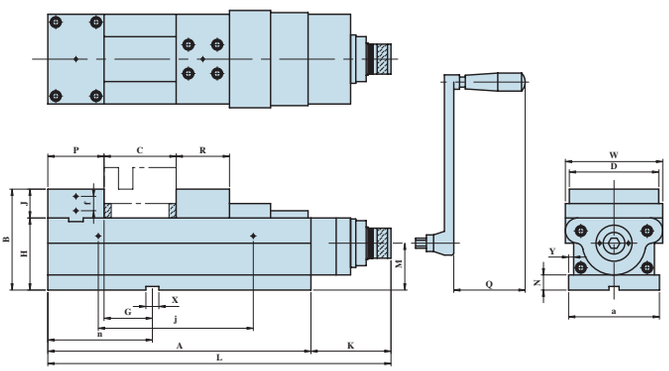
MC Power Vise Hydraulic Type



COMPACT DESIGN-
SMALL LENGTH BODY BUT
SUPER OPEN CAPACITY

HYDRAULIC UNIT-
GREAT SMOOTH OPERATION





ORDER NO.	JAW H	JAW Open C	H	MAX. Clamping Force (8#KN)	G.W. kg
VQC-125H	40	205	140	40	42.5
VQC-160H	45	275	165	60	66
VQC-160LH	45	355	165	60	78.79
VQC-200LH	70	405	190	60	108

ORDER NO.	A	B	a	D	P	R	G	H	J	K	L
VQC-125H	365	140	126	124.5	78	74	66	100	40	113.5	478.5
VQC-160H	455	165	161	159.5	86	86	58	120	45	125.5	580.5
VQC-160LH	535	160	162	160	86	86	58	115	45	125.5	660.5
VQC-200LH	615	180	202	200	102	98	74	110	70	122	737

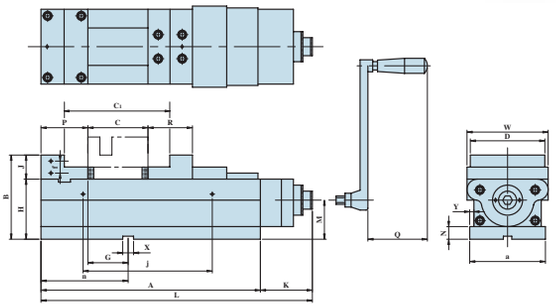
ORDER NO.	M	N	Q	W	X	Y	C OPEN	f	j	n	CODE NO.
VQC-125H	65	21	73	135	18	7	205	20	215	145	4005-005H
VQC-160H	78	21	93	170	18	7	275	20	285	145	4005-006H
VQC-160LH	78	21	93	174	18	7	355	20	285	145	4005-007H
VQC-200LH	75	21	95	217	18	7	405	20	385	177	4005-007AH

MC Power Vise

NEW

DRIVING

TOGGLE JOINT MECHANISM DESIGN FOR HEAVY DUTY WORKING



Features

- Compact design. Great clamping capacity & rigid.
- "Toggle joint mechanism". Provides a steady clamping force against shocks and vibrations during the operatioons, since it clamps the workpiece resiliently with an aid of the "disc-springs" mounted inside.
- Strong clamping force.
- Large jaw stroke range.
- Exclusive Power Vise provide same height same position for horizontal and vertical MC, NC, Machine.
- Body is made of FCD60 high quaility ductile cast iron, resists deflection or bending.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Quick of clamping & locking and easy of operation.

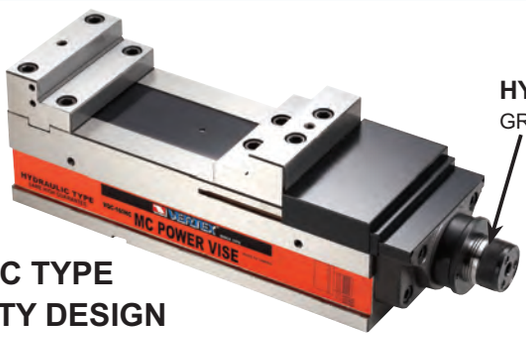
L TYPE IS ULTRA OPEN TYPE

ORDER NO.	JAW H	JAW Open		H	MAX. Clamping Force (KN)	G.W. kg
		C	C1			
VQC-125LC	40	205	283	140	40	40.4
VQC-160LC	50	275	361	165	60	72.3
VQC-1602LC	50	355	455	165	60	78.58
VQC-2002LC	70	405	505	190	60	108

ORDER NO.	A	B	a	D	P	R	G	H	J	K	L	M	N	Q	W	X	Y	C OPEN	C1 OPEN	f	j	n	CODE NO.
VQC-125LC	365	140	126	124.5	78	74	66	100	40	86.5	451.5	65	21	73	135	18	7	205	283	20	215	145	4005-005LC
VQC-160LC	455	165	161	159.5	86	86	58	120	45	98.5	553.5	78	21	93	170	18	7	275	361	20	285	145	4005-006LC
VQC-1602LC	535	160	162	160	86	86	58	115	45	98.5	633.5	78	21	93	174	18	7	355	455	20	285	145	4005-007LC
VQC-2002LC	615	180	202	200	102	98	74	110	70	95	710	75	21	95	217	18	7	405	505	20	385	177	4005-008LC

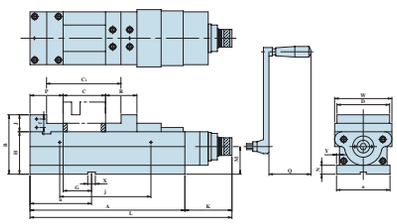
MC Power Vise Hydraulic Type

NEW



HYDRAULIC UNIT-
GREAT SMOOTH OPERATION

COMPACT DESIGN-
SMALL LENGTH BODY BUT SUPER OPEN CAPACITY



HYDRAULIC TYPE
HEAVY DUTY DESIGN

Features

- Compact design. Great clamping capacity & rigid. Light & smooth operation.
- Constructed for milling, drilling, machining center, grinding and many other machine shop applications.
- Body is made of FCD60 ductile cast iron, HIGH deflection/bending resistant.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Hydra-booster system for maximum clamping pressure with minimum force.
- Quick of clamping & locking and easy of operation.
- Accuracy within 0.01/100mm.
- Hydra-booster system is guaranteed for using 2 years limited.
- The hydraulic oil number is 68#

ORDER NO.	JAW H	JAW Open		H	MAX. Clamping Force (8#KN)	G.W. kg
		C	C1			
VQC-125HC	40	205	283	140	40	42.5
VQC-160HC	50	275	361	165	60	66
VQC-160LHC	50	355	455	165	60	78.79
VQC-200LHC	70	405	505	190	60	108

ORDER NO.	A	B	a	D	P	R	G	H	J	K	L	M	N	Q	W	X	Y	C OPEN	C1 OPEN	f	j	n	CODE NO.
VQC-125HC	365	140	126	124.5	78	74	66	100	40	113.5	478.5	65	21	73	135	18	7	205	283	20	215	145	4005-005HC
VQC-160HC	455	165	161	159.5	86	86	58	120	45	125.5	580.5	78	21	93	170	18	7	275	361	20	285	145	4005-006HC
VQC-160LHC	535	160	162	160	86	86	58	115	45	125.5	660.5	78	21	93	174	18	7	355	455	20	285	145	4005-007HC
VQC-200LHC	615	180	202	200	102	98	74	110	70	122	737	75	21	95	217	18	7	405	505	20	385	177	4005-008HC

Upright MC Power Vise

FOR HEAVY DUTY WORKING

Same height guarantee toggle joint type & hydraulic type the size same as VQC-system Page A23 & A26.

UPRIGHT TYPE

ORDER NO.	NUMBER VISE	CODE NO.
VQC-125U2	2 NO. TOGGLE JOINT TYPE	4005-040
VQC-125U4	4 NO. TOGGLE JOINT TYPE	4005-041
VQC-125HU2	2NO. HYDRAULIC TYPE	4005-042
VQC-125HU4	4 NO. HYDRAULIC TYPE	4005-043
VQC-160U2	2NO. TOGGLE JOINT TYPE	4005-044
VQC-160U4	4 NO. TOGGLE JOINT TYPE	4005-045
VQC-160LU2	2 NO. LONG WITH TOGGLE JOINT TYPE	4005-046
VQC-160LU4	4 NO. LONG WITH TOGGLE JOINT TYPE	4005-047
VQC-160HU2	2NO. HYDRAULIC TYPE	4005-048
VQC-160HU4	4 NO. HYDRAULIC TYPE	4005-049
VQC-160LH2	2NO. LONG WITH HYDRAULIC TYPE	4005-050
VQC-160LH4	4 NO. LONG WITH HYDRAULIC TYPE	4005-051
VQC-200L2	2NO. LONG WITH TOGGLE JOINT TYPE	4005-052
VQC-200L4	4 NO. LONG WITH TOGGLE JOINT TYPE	4005-053
VQC-200LH2	2NO. LONG WITH HYDRAULIC TYPE	4005-054
VQC-200LH4	4 NO. LONG WITH HYDRAULIC TYPE	4005-055

Combination MC Power Free Vise

NEW

VQC-125FV

TOGGLE JOINT POWER FORCE TYPE

VQC-125HFV

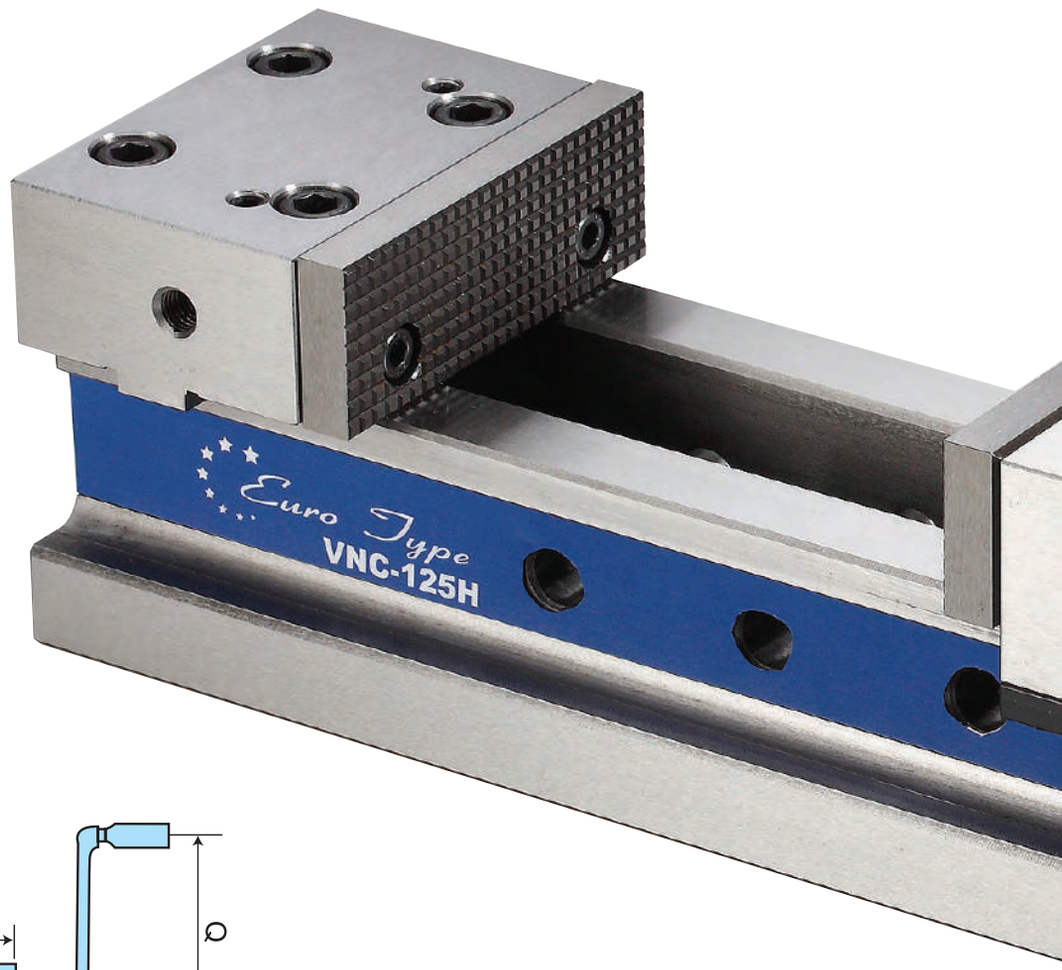
HYDRAULIC TYPE

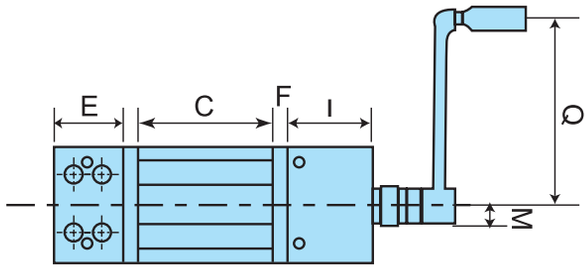
- Heavy duty, high accuracy.
- Free style clamping, for large workpiece.
- Rigidity design, easy setting.

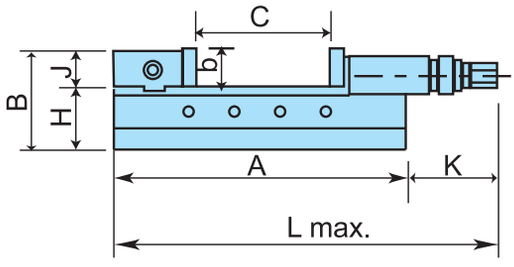
ORDER NO.	JAW WIDTH	JAW HEIGHT	BASE HEIGHT	GUIDE BLOCK	JAW STROKE	CLAMPING FORCE	CODE NO.
VQC-125FV	125	40	100	18	65	40KN	4005-066
VQC-125HFV	125	40	100	18	65	40KN	4005-067
VQC-160FV	275	50	120	18	70	60KN	4005-068
VQC-160HFV	275	50	120	18	70	60KN	4005-069

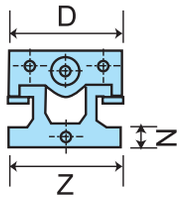
NC Hydro Machine Vices

NEW



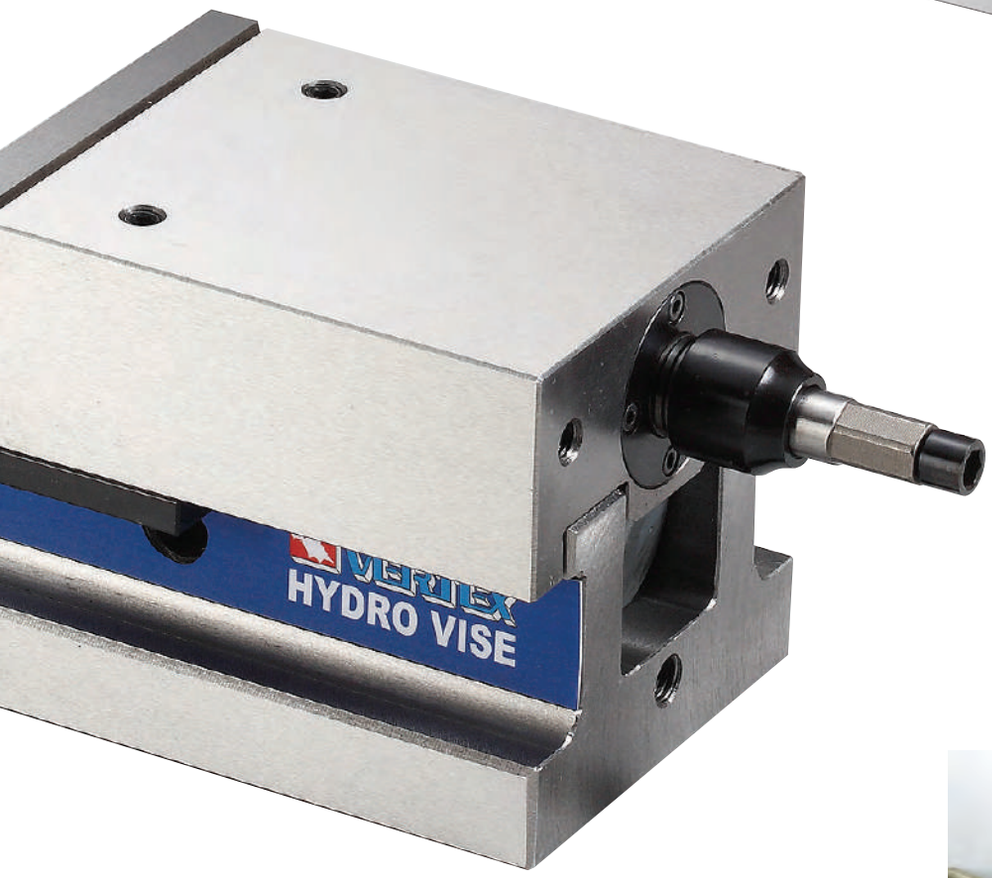






ORDER NO.	MAX. OPENED C	Clamping force KN	L MAX. mm	A	B	D	E	F	b	H	J	N	I	Z	weight kgs	CODE NO.
VNC-100H	205	25	464	380	103.5	99.6	67	13	34	70	33.5	24	133	100	19	4005-100
VNC-125H	225	40	556	432	126	124.6	85	15	45	82	44	27	147	125	32	4005-101
VNC-160H	309	50	684	550	148	159.6	102	18	54	95	53	27	189	160	59	4005-102
VNC-160LH	509	50	884		148	159.6	102	18	54	95	53	27	189		76	4005-103

NC Hydro Machine Vices



Features

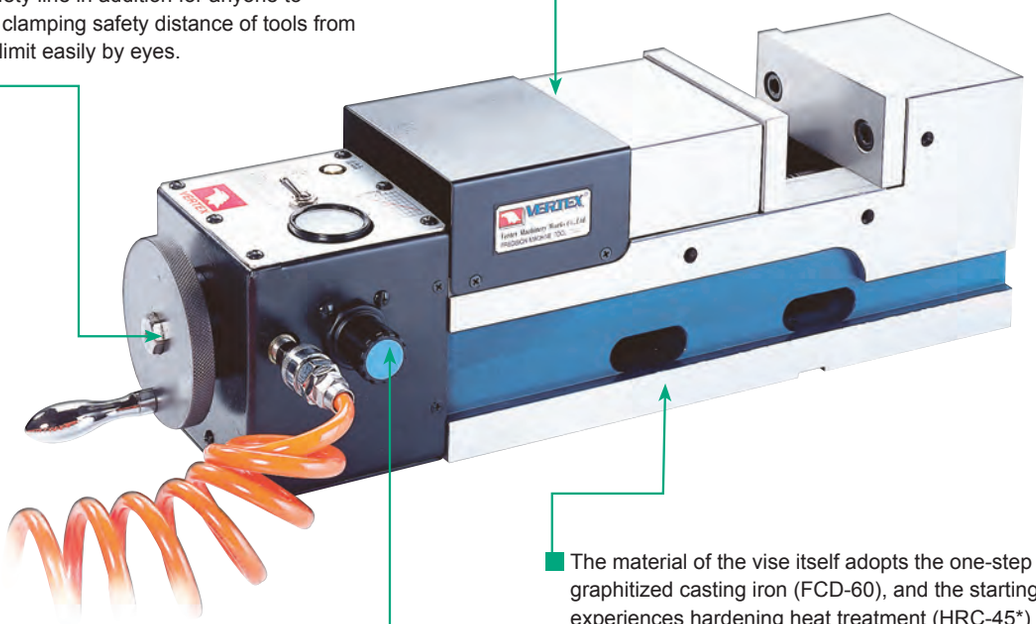
- Hydro-booster system for maximum clamping pressure with minimum force.
- Sliding bed ways flame hardened and ground.
- Compact design. Great clamping capacity. Light & smooth operation.
- Body is made of FCD60 ductile cast iron, High deflection/bending resistant.
- Constructed for machining center, milling, drilling, grinding and many other machine shop applications.

Precision Pneumatic Ang-Fixed Power Vise

Suitable for mass production and to be used on machine centers, milling machines, drilling machines and special purpose machines.

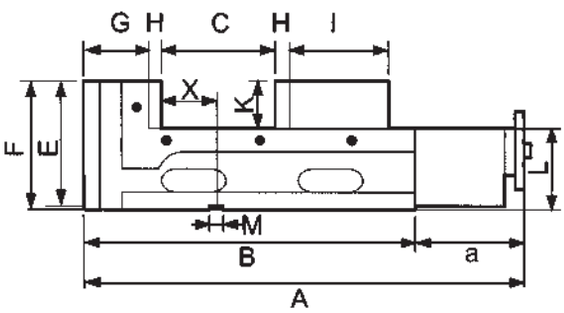
The greatest safety distance of clamping:
The switch speed is only 1.5 seconds, and the safety distance of clamping can be up to 8mm. We design the hand wheel safety line in addition for anyone to distinguish the clamping safety distance of tools from exceeding the limit easily by eyes.

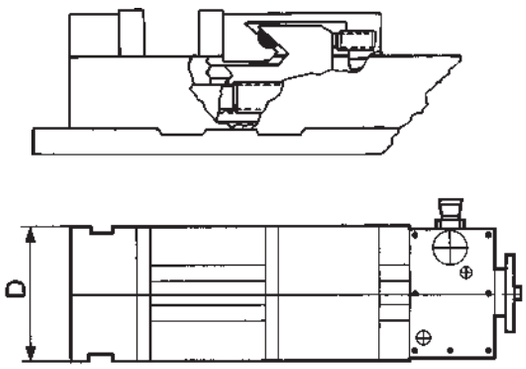
Down trust “semi-spherical segment” mechanism eliminates jaw liffing and work-piece liffing.



The material of the vise itself adopts the one-step design of highductility graphitized casting iron (FCD-60), and the starting rail of the two sides experiences hardening heat treatment (HRC-45*) that can assure good performance on precision, wear-resisting, and tension-resisting.

If the source of air pressure is under low pressure exertion of 8 kgf/cm², it can achieve the super strong clamping capacity of 9000 kg/cm². The clamping capacity from 0~9000 kg/cm² can be freely set and adjust via pressure regulator.
Automatically seeking the highest source of air pressure:
When the pressure regulator sets the regulator sets the required pressure, it will not be out of order because the source of air pressure is low.

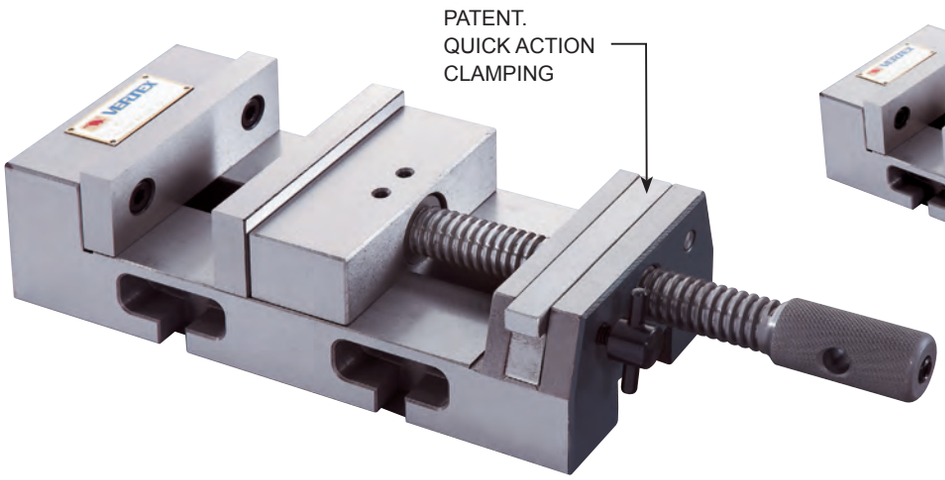


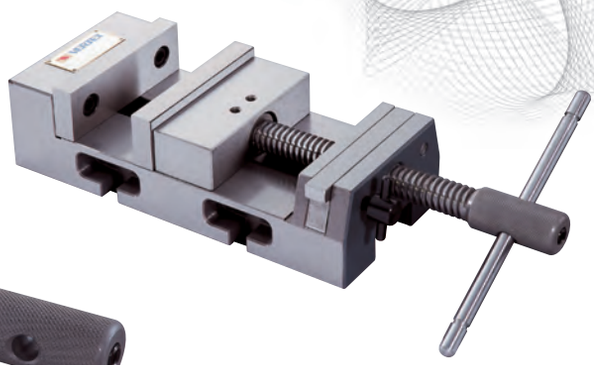


Unit:mm

ORDER NO.	A	B	a	D	E	F	G	H	I	C OPEN	K	L	M	X	Clamp Force (KN)	N.W. (kg)	G.W. (kg)	CODE NO.
VMC-5P	520	380	140	130	157	160	86	15	110	0-150	55	105	18	45	6000	38	41	4005-070
VMC-6P	540	400	140	160	160	163	86	15	120	0-160	58	105	18	45	6000	48	50	4005-071
VMC-6PL	630	490	140	160	160	163	86	15	120	0-250	58	105	18	45	6000	51	56.5	4005-072
VMC-7P	600	460	140	180	170	173	90	18	130	0-200	63	110	18	72	9000	65	66.5	4005-073
VMC-8P	610	470	140	200	170	173	90	18	140	0-200	63	110	18	72	9000	70	76.5	4005-074
VMC-8PL	710	570	140	200	170	173	90	18	140	0-300	63	110	18	72	9000	79	86	4005-075

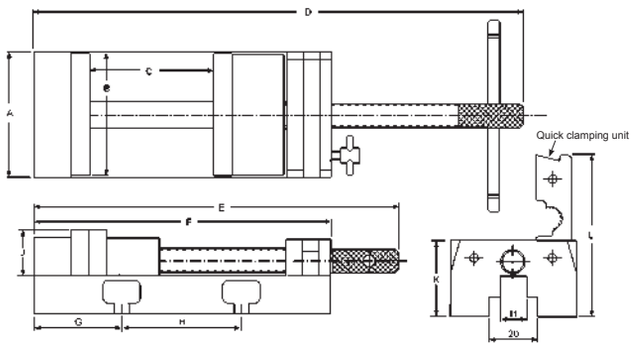
Quick Setting Vise

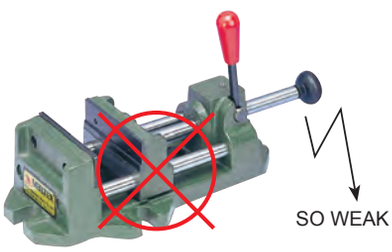




Features

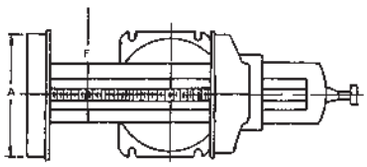
- Special design for quick clamping. (From the acme thread shaft stationly)
- Quick setting by sliding movement. Big clamping capability.
- Operating very quick and easy, can increase so much working efficiency than you can image.
- Good for short term and massive production or proto type work.
- Suit for milling machine, grinder machine, precision drilling machine useding.
- Accurate grounded and assembled.
- Precision cut acme thread, it can get 900kgs high clamping force.
- Horizontal & vertical

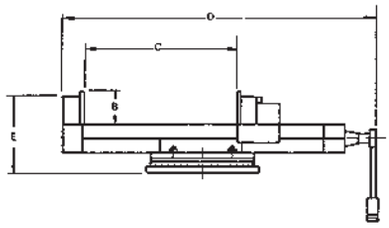




ORDER NO.	A	B	C OPEN	D	E	F	G	H	J	K	L	Max. Clamp Force	G.W.	CODE NO.
VQS-3	82	81	85	374	288	230	75	80	34	66	120	700kgs	7	1002-262
VQS-4	106	105	104	422	317	256	78	100	36	66	135	800kgs	9.5	1002-263
VQS-5	132	131	125	490	366	297	98	100	36	68	166	800kgs	14.5	1002-264

Machine Vise For Shaping & Milling Use

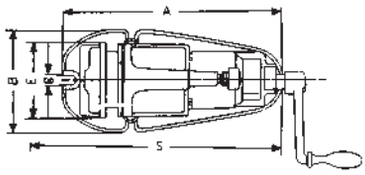


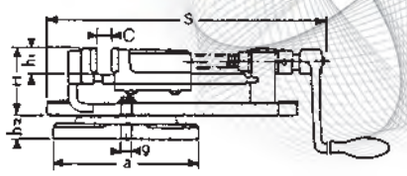


The vise is made of the high tension cast iron, rigidity, large range of clamping spans and more bigger clamping force at draw down jaws, especially suitbable for the heavy duty cutting and the heavy duty planner milling machine to clamp large workpiece.

ORDER NO.	A	B	C OPEN	D	E	F	N.W./G.W. (KGS)	CODE NO.
VSM-12	300	70	300	650	210	220	80/83.9	1002-270
VSM-16	410	90	410	790	240	250	135/141.7	1002-271
VSM-20	500	90	500	910	250	305	175/200	1002-272

B-Type Milling Vise





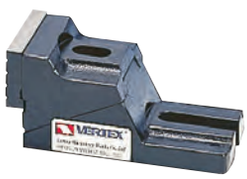
- A wider bottom to increase clamping force.
- Groove device to collect cutting oil.
- Full 360° swivel base with line, accurate graduation.

Please refer to page 11 Fig.2

Unit:mm

ORDER NO.	E	A	B	H	C OPEN	S	a	h1	h2	g1	g2	G.W. kgs	CODE NO.
VBV-4	100	270	140	79	65	305	212	33	28	12	12	13	1002-280
VBV-5	125	350	180	96	100	410	280	37	35	15	15	21.5	1002-281
VBV-6	150	400	210	105	114	460	245	40	40	16	16	38	1002-282

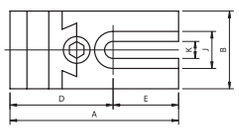
Free Vise

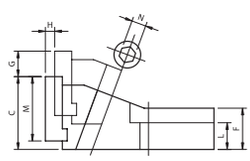


Unit:mm

ORDER NO.	DIMENSION (WxHxL)	CLAMPING CAPACITY (HxL)	WEIGHT (kgs/2PCS)	CODE NO.
FV-350	75x67x150mm	140x350mm	7.5	1002-290
FV-450	100x90x200mm	180x450mm	14	1002-291
FV-550	125x120x250mm	250x550mm	23	1002-292

ORDER NO.	BOLT SIZE
FV-350	M12 x 75L x 2PCS. M12 x 100L x 2PCS
FV-450	M12 x 75L x 2PCS. M12 x 125L x 2PCS
FV-550	M16 x 75L x 2PCS. M16 x 150L x 2PCS





FV TYPE IS LIGHT DUTY.

- Free style clamping.

Unit:mm

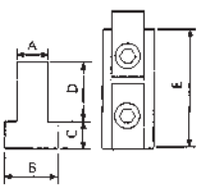
ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	N.W. (kgs)	CODE NO.
SV-62	139	64	59.5	85	54	33.5	21	9	30.5	14	22	52.5	12	5.8	1002-293
SV-85	192	86.5	86	115	77	53	24	10	36	18	25.5	59.5	12	11	1002-294
SV-125	218	127	84	124	94	51.5	33	18	45.5	20	23.5	73	12	21	1002-295

ORDER NO.	BOLT SIZE
SV-62	M12 x 75L x 4PCS
SV-85	M16 x 75L x 4PCS
SV-125	M16 x 75L x 4PCS

- Free style clamping.
- Heavier duty.

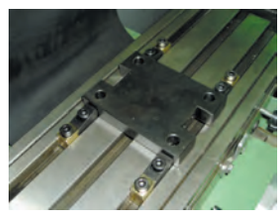
T Slot Clamps

NEW



For Thin Work Piece

- 1 Set consist of 4 vices.
- For thin or small workpiece.
- Good clamping force.
- Quick setting
- Suit for light duty cutting on the milling drilling / EDM machine.



ORDER NO.	A	B	C	D	E	N.W.	CODE NO.
CK-3712	11.5	18	7	16	38	0.6	1002-311
CK-3714	13.5	22	8	18	40	0.7	1002-312
CK-3716	15.5	25	8	21	45	0.9	1002-313
CK-3718	17.5	28	11	24	45	1.1	1002-314
CK-3720	19.5	32	12	26	50	1.5	1002-315

52-Pc Steel Clamping Kit

Specifications

Inch Size

ORDER NO.	Table Slot	Stud Size	G.W. kg	Meas. CFT	CODE NO.
CK-103A	7/16″	3/8″-16w	6.5	(C) 0.8	1003-009
CK-103B	1/2″		6.5		1003-010
CK-104A	9/16″	1/2″-12w 1/2″-13UNC	9.7	(C) 1.0	1003-011
CK-104B	5/8″		10.4		1003-012
CK-105A	11/16″	5/8″-11w	12.5	(C) 1.5	1003-013
CK-105B	3/4″		11.8		1003-014
CK-206	7/8″	3/4″-10w	26.5	2.0	1003-015

Metric Size

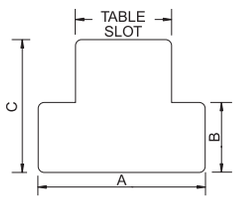
ORDER NO.	Table Slot	Stud Size	G.W. kg	Meas. CFT	CODE NO.
CK-08	10	M8-1.25P	7.4	(C) 0.8	1003-001
CK-10	12	M10-1.25P	7.6		1003-002
CK-12A	14	M12-1.75P	9.4	(C) 1.0	1003-003
CK-12B	15.7		9.5		1003-004
CK-14	16	M14-2.0P	11.1	(C) 1.5	1003-005
CK-16	18	M16-2.0P	12.6		1003-006
CK-18	20	M18-2.5P	25.3	(C)1.6	1003-007
CK-20	22	M20-2.5P	27	(C)2.0	1003-008

- Heat treated steel black oxide finish.
- Block size 1″ (25mm). Set in plastic rack consists of:
  24 pcs Studs (4 ea, 3/4/5/6/7/8 inches or 75/100/125/150/175/200mm.)
  6 pcs T-Nuts
  4 pcs Coupling Nuts
  6 pcs Flange Nuts
  6 pcs Step Clamps
  6 pcs Step Blocks
- CK-18, CK-20, CK-206, Pack in wooden box.
- The parts of every specification all can be purchased individually.

INDIVIDUALLY PARTS

T-SLOT NUT

HRC 34°



Metric Size

ORDER NO.	Table Slot	Thread Size	A	B	C	WEIGHT (kg)	CODE NO.
3412M	10	M8	16	6	12	0.023	1003-020
3423M	12	M10	18	7	14	0.028	1003-021
3414M	14	M12	22	8	16	0.048	1003-022
A3424M	16	M12	25	8	16	0.06	1003-023
B3424M	16	M14	25	8	16	0.06	1003-024
3415M	18	M16	28	11	20	0.087	1003-025
3416M	20	M18	32	12	24	0.142	1003-026
3417M	22	M20	35	14	28	0.165	1003-027
3418M	28	M24	44	18	36	0.23	1003-028

Inch Size

ORDER NO.	Table Slot	Thread Size	A	B	C	Length	WEIGHT (kg)	CODE NO.
3413I	7/16	3/8-16	11/16	7/32	1/2	7/8	0.023	1003-180
3423I	1/2		7/8	9/32	1/2	7/8	0.032	1003-181
3433I	9/16		7/8	11/32	5/8	1-1/8	0.048	1003-182
3414I	9/16	1/2-12 1/2-13	7/8	11/32	5/8	1-1/8	0.048	1003-183
3424I	5/8		1	11/32	5/8	1-1/8	0.06	1003-184
3434I	11/16		1-1/8	7/16	3/4	1-1/4	0.087	1003-185
3415I	11/16	5/8-11	1-1/8	7/16	3/4	1-1/4	0.087	1003-186
3425I	3/4		1-1/4	15/32	3/4	1-1/4	0.102	1003-187
3435I	13/16		1-1/4	9/16	1	1-1/2	0.142	1003-188
3416I	13/16	3/4-10	1-1/4	9/16	1	1-1/2	0.142	1003-189
3426I	7/8		1-1/2	9/16	1	1-1/2	0.175	1003-190
3436I	1		1-5/8	5/8	1	1-3/4	0.2	1003-191
3446I	1-1/16		1-5/8	11/16	1-1/2	2	0.23	1003-192
3417I	1	7/8-9	1-5/8	5/8	1	1-1/2	0.21	1003-193
3418I	1-1/16	1-8	1-5/8	11/16	1-1/2	2	0.25	1003-194

Coupling Nut

HRC 34º

Metric Size

mm

ORDER NO.	Thread	Parallel	Length	Weight (kg)	CODE NO.
2612M	M8x1.25	13	22	0.033	1003-060
2613M	M10x1.5	17	25	0.035	1003-061
2614M	M12x1.75	21	32	0.065	1003-062
2614M-1	M14x2.0	21	32	0.06	1003-063
2615M	M16x2.0	26	41	0.128	1003-064
2616M	M18x2.0	32	48	0.228	1003-065
2617M	M20x2.5	32	48	0.208	1003-066
2618M	M24x3.0	41	64		1003-067

Inch Size

ORDER NO.	Thread	Parallel	Length	Weight	CODE NO.
2612I	5/16-18	9/16	7/8	0.033	1003-060I
2613I	3/8-16	11/16	1	0.035	1003-061I
2614I	1/2-12 1/2-13	7/8	1-1/4		1003-062I
2615I	5/8-11	1-1/16	1-5/8	0.128	1003-064I
2616I	3/4-10	1-1/4	1-7/8	0.22	1003-065I
2617I	7/8-9	1-7/6	1-7/8		1003-066I
2618I	1-8	1-5/8	2-1/2		1003-067I

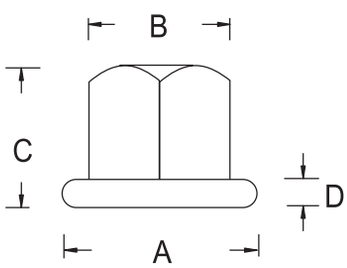
Flange Nut

HRC 34º

Metric Size

mm

ORDER NO.	Thread	A	B (M/M)	C	D	Weight (kg)	CODE NO.
4512	M8x1.25	19	13	10	2	0.013	1003-050
4513	M10x1.5	22	17	12	3	0.023	1003-051
4514	M12x1.75	28	19	16	4	0.043	1003-052
4514M	M14x2.0	28	21	16	4	0.047	1003-053
4515	M16x2.0	35	26	17	5	0.087	1003-054
4516	M18x2.5	41	32	25	6	0.10	1003-055
4517	M20x2.5	44	32	35	6	0.092	1003-056
4518	M24x3.0	50	41	32	6	0.12	1003-057



Inch Size

ORDER NO.	Thread	A	B (M/M)	C	D	Weight (kg)	CODE NO.
4512I	5/16-18	3/4	9/16	3/8	3/32	0.013	1003-050I
4513I	3/8-16	7/8	11/16	1/2	1/8	0.023	1003-051I
4514I	1/2-12NC 1/2-13NC	1-1/8	7/8	5/8	5/32	0.043	1003-052I
4515I	5/8-11	1-3/8	1-1/16	11/16	3/16	0.087	1003-054I
4516I	3/4-10	1-5/8	1-1/4	1	1/4	0.092	1003-055I
4517I	7/8-9	1-3/4	1-7/16	1-1/8	1/4	0.12	1003-056I
4518I	1-8	2	1-5/8	1-1/4	1/4	0.12	1003-057I

Clamping Studs

HRC 27º

Heat Treated Steel **Studs** Black Oxide Finished

Metric Size

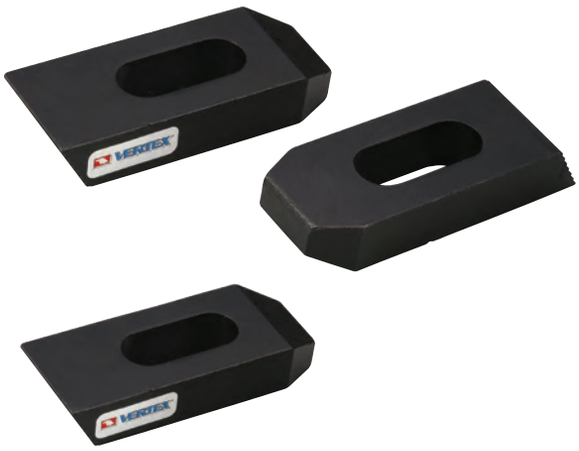
Thread																
Size	**M8x1.25P**		**M10x1.5P**		**M12x1.75P**		**M14x2.0P**		**M16x2.0P**		**M18x2.5P**		**M20x2.5P**		**M24x3.0P**	
Length mm	**ORDER NO. / CODE NO.**															
75	**1323M** 0.023kg	1003 -071	**1333M** 0.04kg	1003 -081	**1343M** 0.06kg	1003 -091	**1343MA** 0.07kg	1003 -101	**1353M** 0.09kg	1003 -111	**1363M** 0.12kg	1003 -120	**1373M** 0.15kg	1003 -140		
100	**1324M** 0.03kg	1003 -072	**1334M** 0.05kg	1003 -082	**1344M** 0.07kg	1003 -092	**1344MA** 0.10kg	1003 -102	**1354M** 0.13kg	1003 -112	**1364M** 0.16kg	1003 -121	**1374M** 0.20kg	1003 -141	**1384M** 0.25kg	1003 -150
125	**1325M** 0.04kg	1003 -073	**1335M** 0.06kg	1003 -083	**1345M** 0.09kg	1003 -093	**1345MA** 0.13kg	1003 -103	**1355M** 0.16kg	1003 -113	**1365M** 0.20kg	1003 -122	**1375M** 0.25kg	1003 -142	**1385M** 0.35kg	1003 -151
150	**1326M** 0.05kg	1003 -074	**1336M** 0.07kg	1003 -084	**1346M** 0.11kg	1003 -094	**1346MA** 0.15kg	1003 -104	**1356M** 0.19kg	1003 -114	**1366M** 0.25kg	1003 -123	**1376M** 0.30kg	1003 -143	**1386M** 0.45kg	1003 -152
175	**1327M** 0.06kg	1003 -075	**1337M** 0.09kg	1003 -085	**1347M** 0.13kg	1003 -095	**1347MA** 0.18kg	1003 -105	**1357M** 0.23kg	1003 -115	**1367M** 0.30kg	1003 -124	**1377M** 0.35kg	1003 -144	**1387M** 0.53kg	1003 -153
200	**1328M** 0.07kg	1003 -076	**1338M** 0.10kg	1003 -086	**1348M** 0.15kg	1003 -096	**1348MA** 0.20kg	1003 -106	**1358M** 0.25kg	1003 -116	**1368M** 0.32kg	1003 -125	**1378M** 0.40kg	1003 -145	**1388M** 0.60kg	1003 -154
250									**13510M** 0.31kg	1003 -117	**13610M** 0.40kg	1003 -126	**13710M** 0.50kg	1003 -146		
300									**13512M** 0.38kg	1003 -118	**13612M** 0.50kg	1003 -127	**13712M** 0.65kg	1003 -147		

Inch Size

Thread												
Size	**3/8-16**		**1/2-12 1/2-13**		**5/8-11**		**3/4-10**		**7/8-9**		**1”-8**	
Length INCH	**ORDER NO. / CODE NO.**											
3”	**1333I** 0.04kg	1003-081I	**1343I** 0.06kg	1003-091I	**1353I** 0.09kg	1003-111I	**1363I** 0.12kg	1003-120I	**1373I** 0.183kg	1003-140I		
4”	**1334I** 0.05kg	1003-082I	**1344I** 0.07kg	1003-092I	**1354I** 0.13kg	1003-112I	**1364I** 0.16kg	1003-121I	**1374I** 0.25kg	1003-141I	**1384I** 0.25kg	1003-150I
5”	**1335I** 0.06kg	1003-083I	**1345I** 0.09kg	1003-093I	**1355I** 0.16kg	1003-113I	**1365I** 0.20kg	1003-122I	**1375I** 0.30kg	1003-142I	**1385I** 0.35kg	1003-151I
6”	**1336I** 0.07kg	1003-084I	**1346I** 0.11kg	1003-094I	**1356I** 0.19kg	1003-114I	**1366I** 0.25kg	1003-123I	**1376I** 0.40kg	1003-143I	**1386I** 0.45kg	1003-152I
7”	**1337I** 0.09kg	1003-085I	**1347I** 0.13kg	1003-095I	**1357I** 0.23kg	1003-115I	**1367I** 0.30kg	1003-124I	**1377I** 0.45kg	1003-144I	**1387I** 0.53kg	1003-153I
8”	**1338I** 0.10kg	1003-086I	**1348I** 0.15kg	1003-096I	**1358I** 0.25kg	1003-116I	**1368I** 0.32kg	1003-125I	**1378I** 0.50kg	1003-145I	**1388I** 0.60kg	1003-154I
9”												
10”					**13510I** 0.31kg	1003-117I	**13610I** 0.40kg	1003-126I				
12”					**13512I** 0.38kg	1003-118I	**13612I** 0.50kg	1003-127I				
14”							**13614I** 0.62kg	1003-128I				
16”							**13616I** 0.75kg	1003-129I				
18”							**13618I** 0.87kg	1003-130I				
20”							**13620I** 1.00kg	1003-131I				

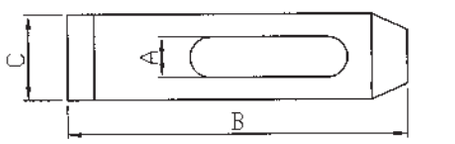
Step Clamp

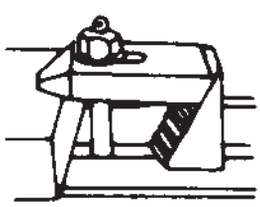
HRC 37º



Metric Size

ORDER NO.	Bolt Size	A slot	B Length	C Width	D Thickness	Weight (kg)	CODE NO.
6113M	M8 or M10	11	64	25	12	0.25	1003-030M
6123M	M8 or M10		100	25	16	0.49	1003-031M
6133M	M8 or M10		150	28	19	0.99	1003-032M
6214M	M12	14	64	28	12	0.25	1003-033M
6224M	M12		100	32	19	0.35	1003-034M
6234M	M12		150	32	22	0.60	1003-035M
6215M	M16	18	64	32	22	0.31	1003-036M
6225M	M16		100	38	19	0.85	1003-037M
6235M	M16		150	38	22	1.47	1003-038M
6316M	M20 or M18	20	100	38	19	0.75	1003-039M
6326M	M20 or M18		150	38	25	1.43	1003-040M
6336M	M20 or M18		200	44	28	2.82	1003-041M
6417M	M24	26	150	50	32	1.9	1003-042M
6427M	M24		200	50	35	2.75	1003-043M
6437M	M24		250	50	38	3.8	1003-044M



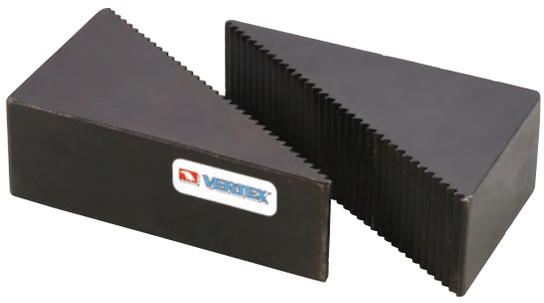


Inch Size

ORDER NO.	Bolt Size	A slot	B Length	C Width	D Thickness	Weight (kg)	CODE NO.
6113	5/16 or 3/8	11	64	25	12	0.25	1003-030
6123	5/16 or 3/8		100	25	16	0.49	1003-031
6133	5/16 or 3/8		150	28	19	0.99	1003-032
6214	1/2	14	64	28	12	0.25	1003-033
6224	1/2		100	32	19	0.35	1003-034
6234	1/2		150	32	22	0.60	1003-035
6215	5/8	18	64	32	22	0.31	1003-036
6225	5/8		100	38	19	0.85	1003-037
6235	5/8		150	38	22	1.47	1003-038
6316	3/4	20	100	38	19	0.75	1003-039
6326	3/4		150	38	25	1.43	1003-040
6336	3/4		200	44	28	2.82	1003-041
6417	7/8 or 1	26	150	50	32	1.9	1003-042
6427	7/8 or 1		200	50	35	2.75	1003-043
6437	7/8 or 1		250	50	38	3.8	1003-044

Step Block

HRC 37º



mm

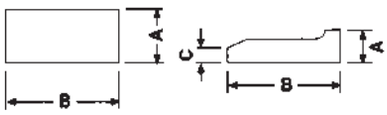
STANDARD STEEL BLOCK (25 WIDE A)(31 WIDE B)				
ORDER NO.	CAPACITY OF FULL BLOCK	HEIGHT OF BLOCK	WEIGHT (kg)	CODE NO.
5114	32 to 46	30	0.14	1003-170
5124	50 to 75	48	0.28	1003-171
5134	100 to 150	97	1.245	1003-172
HEAVY DUTY STEEL BLOCK 33mm WIDE				
5215	63 to 94	63	0.53	1003-173
5225	75 to 200	75	1.72	1003-174
5235	138 to 230	138	3.25	1003-175

Ground Parallels

ORDER NO.VP-100 CODE NO.1004-001

To provide more convenient processing for milling vise.

- Hardness: HRC 48º-53º
- Accuracy: 0.01mm
- Process: Four-side ground
- 1 set includes 18 pcs
- Packed by plastic case, G.W.: 11.5 kgs, Meas: 0.3 CFT.



Unit:mm

BODY SIZE	CLAMP SIZE
AxBxLxPcs	AxBxCxLxPcs
5x16x100x2	15x31x2.5x200x2
6x18x100x2	
8x24x100x2	
10x30x100x2	
12x36x150x2	
14x48x150x2	
18x60x150x2	
22x62x150x2	

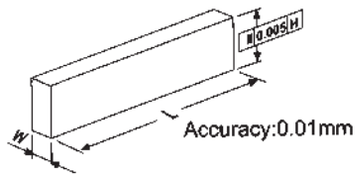
Ground Parallels

ORDER NO.VP-118A CODE NO.1004-010

8.5mm WIDTH, 5.8kgs

- Hardness: HRC 48º-53º

MADE OF HIGH GRADE ALLOY STEEL HARDENED AND GROUND.



Unit:mm

WxHxLxPcs	
8.5x14x150x2	8.5x32x150x2
8.5x16x150x2	8.5x36x150x2
8.5x20x150x2	8.5x40x150x2
8.5x24x150x2	8.5x44x150x2
8.5x30x150x2	

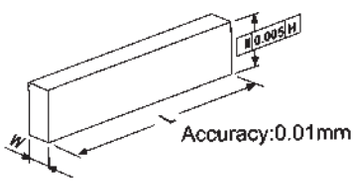
Ground Parallels

ORDER NO.VP-128A CODE NO.1004-020 **VP-128A 10mm WIDTH**

28 PCS/SET 10.7kgs

- Hardness: HRC 48º-53º

MADE OF HIGH GRADE ALLOY STEEL HARDENED AND GROUND.



Unit:mm

WxHxLxPcs	
10x14x150x2	10x28x150x2
10x16x150x2	10x30x150x2
10x18x150x2	10x32x150x2
10x20x150x2	10x35x150x2
10x22x150x2	10x40x150x2
10x24x150x2	10x45x150x2
10x26x150x2	10x50x150x2

Precision Parallels

ORDER NO.VP-136 CODE NO.1004-030

To provide more convenient processing for milling vise

- Hardness: HRC 48º-53º

ACCURACY:0.01mm
WIDTH 8.0mm
36 PCS/SET 12.3kgs

Unit:mm

WxHxLxPcs	
8x16x150x2	8x34x150x2
8x18x150x2	8x36x150x2
8x20x150x2	8x38x150x2
8x22x150x2	8x40x150x2
8x24x150x2	8x42x150x2
8x26x150x2	8x44x150x2
8x28x150x2	8x46x150x2
8x30x150x2	8x48x150x2
8x32x150x2	8x50x150x2

VP-018 Thin Type Parallels Set

ORDER NO.VP-018 CODE NO.1004-040 **3Wx150Lx20 PCS/SET**

- Hardness: HRC 48º-53º

G.W. 2.2kgs.
PACKING: 175x65x200 mm
ACCURACY: 0.01mm
THICKNESS 1/8″≒3mm

WxHxLxPcs	WxHxLxPcs
3x13x150x2	3x28x150x2
3x16x150x2	3x31x150x2
3x19x150x2	3x35x150x2
3x22x150x2	3x38x150x2
3x25x150x2	3x41x150x2

VP-163 Precision Parallels

ORDER NO.VP-163 CODE NO.1004-050 **5Wx150Lx8 PCS/SET**

- Hardness: HRC 48º-53º

G.W. 1.7kgs.
PACKING: 100x65x175 mm
ACCURACY: 0.01mm
THICKNESS 3/16″≒5mm

WxHxLxPcs
5x25x150x2
5x31x150x2
5x38x150x2
5x44x150x2

VP-064 Precision Parallels

ORDER NO.VP-064 CODE NO.1004-060 **6Wx150Lx18 PCS/SET**

- Hardness: HRC 48º-53º

G.W. 4.5kgs.
PACKING: 210x178x68 mm
ACCURACY: 0.01mm
THICKNESS 1/4″≒6mm

WxHxLxPcs	WxHxLxPcs
6x19x150x2	6x35x150x2
6x22x150x2	6x38x150x2
6x25x150x2	6x41x150x2
6x28x150x2	6x44x150x2
6x31x150x2	

VP-050 Precision Parallels

ORDER NO.VP-050 CODE NO.1004-070 13Wx150Lx8 PCS/SET

- Hardness: HRC 48º-53º

G.W. 4.5kgs.
PACKING: 180x70x310 mm
ACCURACY: 0.01mm
THICKNESS 1/2″≒13mm

WxHxLxPcs
13x25x150x2
13x31x150x2
13x38x150x2
13x44x150x2

VP-033 Precision Parallels

ORDER NO.VP-033 CODE NO:1004-080 **200Lx8 PCS/SET**
Accuracy: 0.01 mm

- Hardness: HRC 48º-53º

G.W. 6.2kgs.
PACKING: 180x65x230 mm
LONGER TYPE,
SUIT FOR BIGGER VISE.

WxHxLxPCS
8x24x200x2
12x36x200x2
22x40x200x2
31x15x200x2x2.5 For Clamping

VP-146 Ground Parallels

ORDER NO.VP-146 CODE NO:1004-082 **4.6Wx150Lx12 PCS/SET**
Accuracy: 0.01 mm

NEW

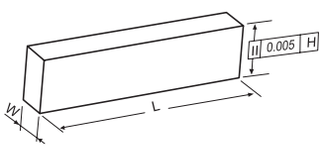
G.W. 3kgs.
Material: S45C
Hardness: HRC48º-53º

WxHxLxPCS
4.6x32x150x2
4.6x34x150x2
4.6x36x150x2
4.6x38x150x2
4.6x40x150x2
4.6x44x150x2

VP-168 Ground Parallels

ORDER NO.VP-168 CODE NO:1004-083 **6.8Wx150Lx14 PCS/SET**
Accuracy: 0.01 mm

NEW



G.W. 3.5kgs.
Material: S45C
Hardness: HRC48º-53º

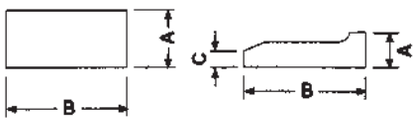
WxHxLxPCS
6.8x15x150x2
6.8x18x150x2
6.8x21x150x2
6.8x25x150x2
6.8x27x150x2
6.8x31x150x2
6.8x35x150x2

VP-200 Ground Parallels

ORDER NO.VP-200 CODE NO.1004-085

MADE OF HIGH GRADE ALLOY STEEL HARDENED AND GROUND.
ACCURACY: 0.01/100 MM

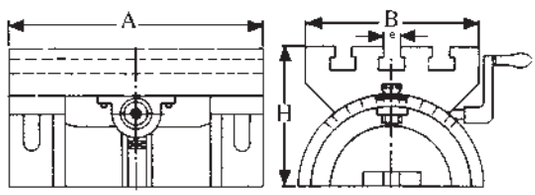
- Hardness: HRC 48º-53º



FOR OVER 150 m/m, 200m/m JAW PLATE VISE USING

BODY SIZE	CLAMP SIZE
AxBxLxPcs	AxBxCxLxPcs
5x16x150x2	31x15x200x2x2.5
6x18x150x2	
8x24x150x2	
10x30x150x2	
12x36x200x2	
14x48x200x2	
18x60x200x2	
22x62x200x2	

Adjustable Angle Plate

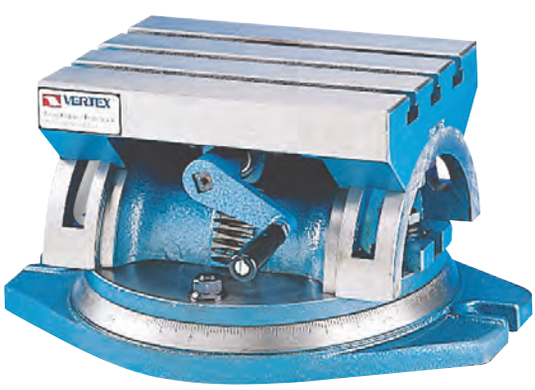


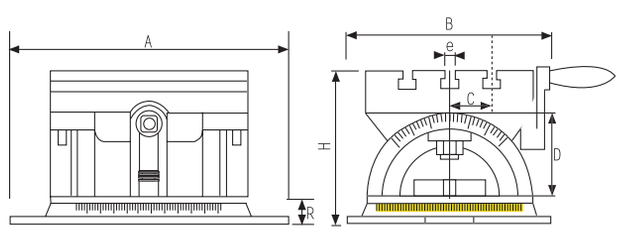
Unit:mm

ORDER NO.	TABLE LxW			T-SLOT	APPROX WEIGHT(kg)	CODE NO.
	A	B	H	e		
VP-180	180	130	91	10	7.5	1004-089
VP-250	255	181	133	12	29	1004-090
VP-380	380	254	185	16	56.5	1004-091
VP-600	600	300	205	16	85.5	1004-092

1. For angle setting on various machine tools.
2. Adjustadle 45º each side.
3. Material: FC30
4. Lower plate and bigger working space.

Angle Plate With Swivel Base





Unit:mm

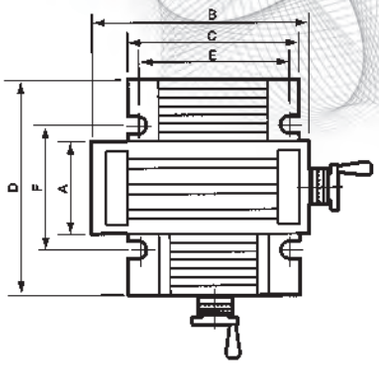
ORDER NO.	Table LxW			T-SLOT			R	WEIGHT (kg)	CODE NO.
	A	B	H	e	C	D			
VP-250S	243	230	177	10	50	90	40	40	1004-100
VP-380S	360	270	233	12	68	127	48	76	1004-101

360º SWIVEL BASE.

Precision Cross Table

VCT-407

VCT-514



- Material: over FC-30
- Precision: 0.02/100mm
- Feature: The sliding surfaces are treated by heat-treatment & precision ground
- Can be used as measurement table

Specifications

Unit:mm

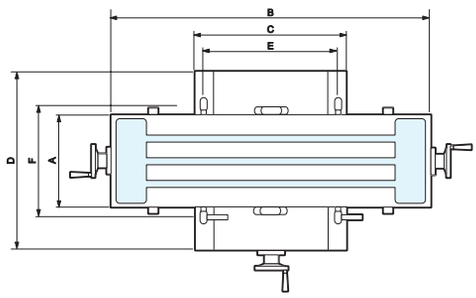
ORDER NO.	A	B	C	D	E	F	Stroke	T Slot	Total height	Dial graduation	PACKING LxWxH m/m	WEIGHT kgs	CODE NO.
VCT-407	100	180	130	100	115	50	50x80	3/8”	100	2.5mm/0.02	290x240x140	12	1007-001
VCT-514	150	350	250	300	206	208	156x170	3/8”	134	4mm/0.02	510x450x240	33.5	1007-002
VCT-820	200	500	300	400	250	290	200x250	3/8”	155	4mm/0.02	640x520x200	72	1007-003
VCT-1024	250	600	400	500	340	430	250x300	1/2”	210	4mm/0.02	790x680x310	141	1007-004

Precision Cross Table

ORDER NO.VCT-830 CODE NO.1007-010

VCT-830

A heavy, rugged slide in all kinds of positioning, milling, drilling micro-scope viewing and staging, adjustable bases for heavy loads, small jig boring, precision cut-off.



Specifications

Unit:mm

ORDER NO.	A	B	C	D	E	F	Stroke	T Slot	Total height	Dial graduation	PACKING LxWxH m/m	WEIGHT kgs	CODE NO.
VCT-830	210	730	345	405	305	230	190x350	16	185	2.5mm/0.05	991x584x292	100	1007-010

Cross Table

ORDER NO.VCT-512 CODE NO.1007-020

VCT-512

Table: 300x140mm
Height: 115mm
Travel: 200mm longitudinal.
125mm transverse.
Base: 225mm x 200mm oval with U slots for up to 16 bolts on 190 to 210 bolts circle.
Dial Graduated: 0.03mm
Net weight: 16.5kgs.
Packing Volume of each unit: 430x265x155mm
LIGHT DUTY ONLY

Right Angle Head

VRA-TYPE

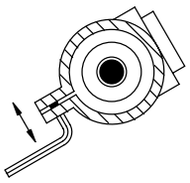
- Used on Vertical Milling Machine to make horizontal work.
- Rigidity constructed suitable for horizontal cutting.
- The clamping bushing to suit milling machine.
- Maximum spindle speed allowed right angle. 2000 R.P.M.

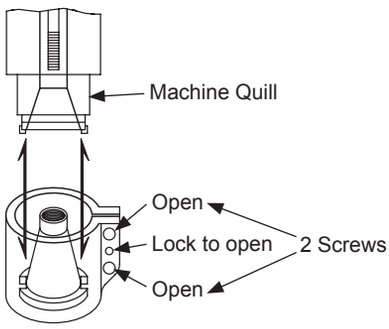
※Please notifty the quill dia. when ordering

ORDER NO.	SUITABLE MILLING HEAD QUILL DIAMETER	WEIGHT (kgs)	CODE NO.
VRA-R8	85.725mm~86mm	12.5	1008-001
VRA-NT 30	85.725mm~86mm	13	1008-002
VRA-NT 40	85.725, 100, 105, 110, 115mm	18	1008-003

ARBOR FOR CUTTER INCH OF MERTIC SIZE

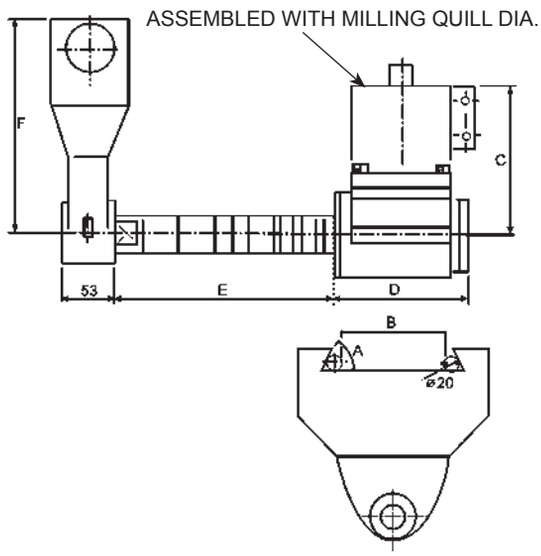
VRA-R8	R8-SCA1″	R8-SCB22
VRA-NT 30	NT30-SCA1″	NT30-SCB27
VRA-NT 40	NT40-SCA1″	NT40-SCB27





- Loose 2 screws to match with machine.
- Tighten 2 screws to fix on quill D.
- Assemble with milling quill dia.

Horizontal Milling Attachment



- Special dovetail degree, also can supply.....please notify.
- VHA-TYPE including right angle head, long horizontal arbor and breaker. VHA-R-8-27mm VHA-NT-30/NT-40-27mm for The mm size, for inch size are same 25.4mm (1″)
- The quill diameter is same as VRA-Type
- Maximum spindle speed allowed right angle. 2000 R.P.M.
- Benefit: convert your vertical mill to a horizontal mill. Designed to simplify right angle work by reducing the need for special tooling and complex fixtures, gains your efficiency, save your time and money.

Horizontal Milling Arbor Support

SPEC. / TYPE	SUITABLE M/C RAM DOVETAIL WIDTH	WEIGHT(kgs)
A 50°	B 140mm~170mm	25.7
A 55°	B 140mm~170mm	26.5
A 60°	B 140mm~170mm	30.8

Unit:mm

ORDER NO.	C	D	E	F	CODE NO.
VHA-R-8	175	138	255	233	1008-010
VHA-NT-30	175	160	270	233	1008-011
VHA-NT-40	183	190	270	233	1008-012

Power Table Feed - Super Power Type 500SX, 500SY, 500SZ Series

For Longitudinal X Axis

For Cross Y Axis

For Vertical Z Axis

500S Type series

VPF-250X
VPF-250Y
VPF-250Z

The VERTEX vertical milling machines-model: VTM-2S/2V/3V/4V/5V and all milling machine without gearbox table feed device. All type milling/drilling machines high torque. Easy installation. Automatic shutoff. Superior thermal characteristic. Smooth operations. Safety option. Trouble-free performance. super power.
The max. torque is 650 in/1b

- New super power design and construction materials.
- Top quality. Long life span designed.

VPF-235

Features

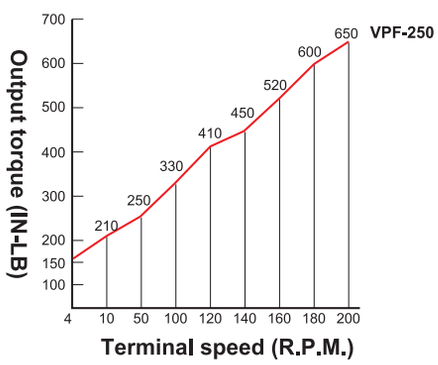
- The VERTEX power table feed for 2V, 3V, 5V milling machine.
- Easy to install, no modification needed.
- Highest quality design and construction materials.
- Circuit panel is designed with easily replaceable insert type connectors.
- Assy-gear (nylon) clutch has built in torque release to prevent damage to shaft and metal gear if too much resistance is met.

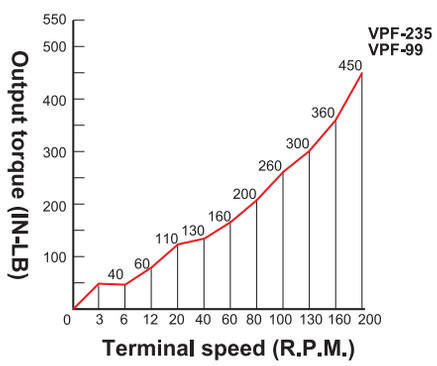
VPF-99

Features

- Application: the VERTEX power table feed for Drill/Milling machine.
- Easy to install, no modification needed.
- Highest quality design and construction.
- Circuit panel is designed for easy replacement with insert type connectors.
- Assy-gear clucth has limit for twisting: When power feed is working and accepting tremendous obstacle, the assy-gear clucth will automatically become natural turning in order to reduce damage.

OPTIONAL
Transformer 110V 220V
ORDER NO. VPF-TF
CODE NO. 1009-006
TR1: Output TR2:2 Output
Output: 110V 50/60Hz,
power supply: 50/60Hz, 1-phase
220, 240, 380, 415, 440V
THIS TRANSFORMER IS FOR VPF-TYPE USE ONLY.





ORDER NO.	VOLTAGE	Speed Range	Rapid Speed	Max. Torque	LxWxH	G.W.(kgs)	CODE NO.
VPF-250 x	110V	4-160rpm	200rpm	650 in/lb	290x200x320mm	6.3	1009-001
VPF-250 y						6.7	1009-002
VPF-250 z						6.9	1009-003
VPF-235 x	110V	0-140rpm	200rpm	440 in/lb	290x200x320mm	6.2	1009-004
VPF-99 x	110V	0-165rpm	240rpm	450 in/lb	290x200x315mm	6.2	1009-005

Air Power Drawbar

- It will increase you productivity with more profits as cutter replacement needs only 3 sec and the speed of replacement is more than 10 times to compare with traditional cutter replacement.

Air power drawbar
PD-150, PD-200

- It can be installed in any kind of machine, of which the main spindle are R-8, NT #30, #40 or #50.
- It is convenient for the machinist who wants increased production and performance from his machine.
- It is suitable for NC and general milling machines.
- This device is easily installed needs only 5 seconds to change the cutting tool.
- Main power is air compression.
- This device is designed with safety device controlled with solenoid vavle. The power drawbar cannot be operated while machine is running.

Standard equipment

- Power motor
- Control box
- Air filter and lubricant
- Drawbar
- Mounting hardware

ORDER NO.		SPEED	TORQUE	AIR PRESSURE	VOLTAGE FOR MAGNETIC VALVE	G.W. kgs	PACKING LxWxH	CODE NO.
PD-150 FOR	R-8	3000 R.P.M.	150 ft-lb	90 psi 6.3 kg/cm^2	AC 110V OR 220V DC 24V	9.8	650x300x200	1010-001
	NT-30							1010-002
	NT-40							1010-003
PD-200 FOR	NT-50	3000 R.P.M.	200 ft-lb	90 psi 6.3 kg/cm^2	AC 110V OR 220V DC 24V	11	650x300x200	1010-004

Precision Slotting Head

ORDER NO.VSH-125 CODE NO.1012-010

Features

- Special design worm and worm gear with linkage transmission mechanism, well construction and highly power output.
- The ram-sliding surface are hardened and precision ground
- Built in lubricating system for smoothly running and prolong the life of head
- Available mounting on any type milling m/c back side of the ram.

Specification

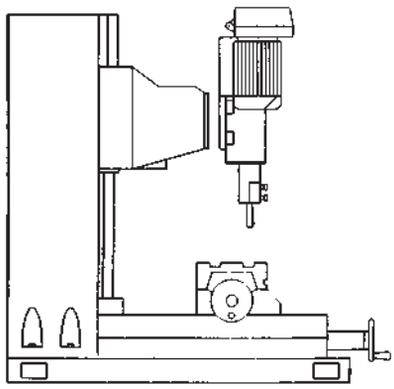
Stroke: 125mm (5″)
No. of stroke speed change: 5 steps
Stroke speed (stroke/min): 30, 47, 69, 98, 140 spm (50HZ)
Stroke speed (stroke/min): 35, 54, 79, 112, 160 spm (60HZ)
Driving Motor: 3/4HP-6P
WEIGHT: 150kgs

Optional Accessories

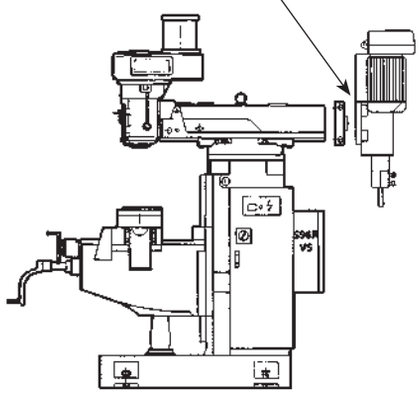
- Flange A
- Flange B
- Slotting bar & cutter 4, 5, 6, 7, 8, 10mm

ORDER NO.	CUTTER & DESCRIPTION	WEIGHT (kg)	CODE NO.
VSH-4C	Slotting bar 4mm	0.32	1012-011
VSH-5C	Slotting bar 5mm	0.32	1012-012
VSH-6C	Slotting bar 6mm	0.56	1012-013
VSH-7C	Slotting bar 7mm	0.62	1012-014
VSH-8C	Slotting bar 8mm	0.80	1012-015
VSH-10C	Slotting bar 10mm	0.81	1012-016
VSH-FGA	FLANGE A	11	1012-017
VSH-FGB	FLANGE B	23	1012-018

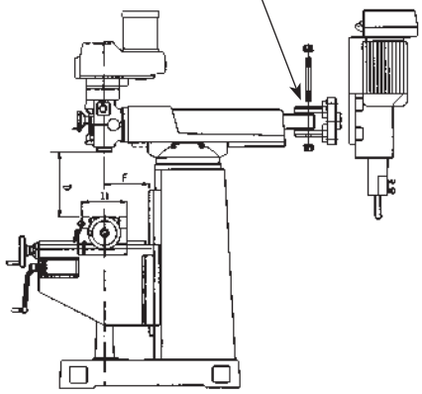
1. Direct mounting



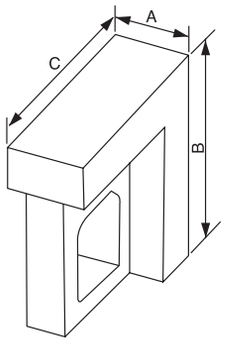
2. Mounting with flange A



3. Mounting with flange B



Precision Right Angle Plate

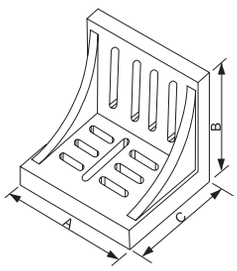


- Made of finest quality castings, stress relieved.
- All outside surfaces closely finished for square and parallel references:
  Precision ground: Square within 0.01mm per 100mm
  Parallel within 0.01mm per 100mm

Unit:mm

ORDER NO.	Approx Dimensions			WEIGHT (kgs)	CODE NO.
	A	B	C		
VRH-4	102	126	150	6.3	1013-001
VRH-5	126	202	300	16.9	1013-002
VRH-6	150	150	202	14.5	1013-003
VRH-8	202	250	300	32.5	1013-004

Right Angle Plate

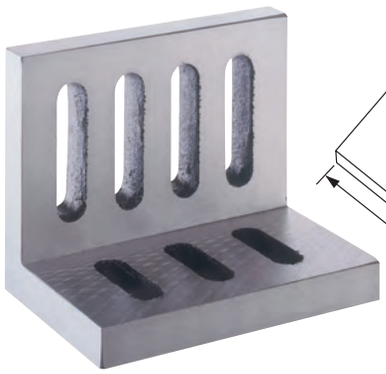


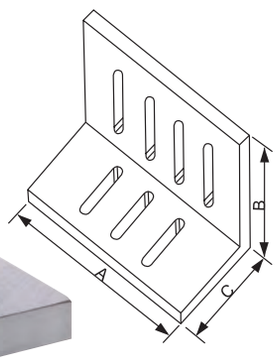
- Made of high tensile cast iron
- Webbed style accurately grounded, square and parallel on outside faces and ends within 0.01mm per 100mm

Unit:mm

ORDER NO.	Approx Dimensions			WEIGHT (kgs)	CODE NO.
	A	B	C		
VR-6	150	126	115	3.8	1013-010
VR-8	202	150	126	7.4	1013-011
VR-10	250	202	126	12.1	1013-012
VR-12	300	228	202	23.7	1013-013

Slotted Angle Plates

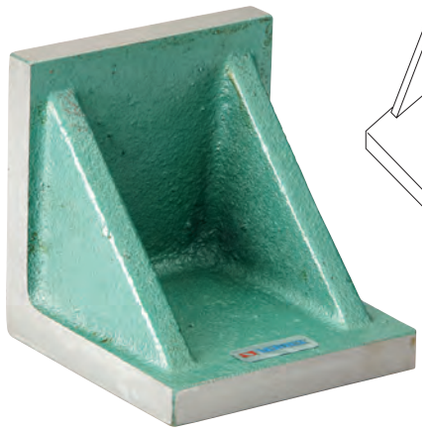


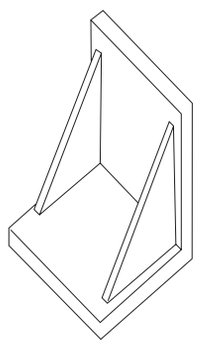


- Many size also stocked with precision ground finish, prices on request.
- Made of high tensile cast iron properly seasoned against distortion. Open end style accurately machined square and parallel on all faces.

ORDER NO.	Approx Dimensions			APPROX WEIGHT (kgs)	CODE NO.
	A	B	C		
VR-45	4-1/2″	3-1/2″	3″	1.3	1013-020
VR-60	6″	5″	4-1/2″	3.2	1013-021
VR-80	8″	6″	5″	7.4	1013-022
VR-100	10″	8″	6″	12	1013-023
VR-120	12″	9″	8″	19.4	1013-024

Plain Angle Plates





Machined or precision ground

- Made from high tensile cast iron - normalized and stress relieved.
- Machined: Flat and square within .002” per 6” for general work.
- Precision ground: Flat and square within .0005” per 6” for layout and inspection or precision machining.

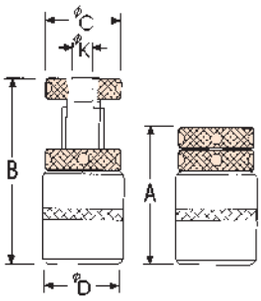
ORDER NO.	Size in inches	APPROX WEIGHT (kgs)	CODE NO.
VR-22	2x2x2	0.4	1013-030
VR-33	3x3x3	1.2	1013-031
VR-44	4x4x4	2.5	1013-032
VR-55	5x5x5	4.3	1013-033
VR-66	6x6x6	7	1013-034
VR-88	8x8x8	15.2	1013-035
VR-1010	10x10x10	27.7	1013-036
VR-1212	12x12x12	42.9	1013-037

Screw Jack

- Material: S45C
  Support heavy weight

ORDER NO.	ADJUSTABLE CAPACITY	ØD	K.G.	CODE NO.
VSJ-40	40-55mm	38	0.3	1014-000
VSJ-70	70-95mm	38	0.4	1014-001
VSJ-150	100-150mm	50	1.1	1014-002
VSJ-250	140-230mm	53	2.3	1014-003
VSJ-500	280-375mm	73	4.6	1014-004

Screw Jack With Magnets



- Cross type fixture gives best positioning.
- Heat treatment in parts contact face.
- Built-in magnets designed, easy to clean chips.

ORDER NO.	A	B	C	D	K	K.G.	CODE NO.
VSJM-50	40	50	35	40	11.5	0.4	1014-010
VSJM-70	50	65	35	40	11.5	0.5	1014-011
VSJM-85	65	85	40	45	11.5	0.7	1014-012
VSJM-110	85	110	40	45	11.5	0.8	1014-013
VSJM-165	110	165	45	50	11.5	1.4	1014-014

Screw Jack Sets

NEW

SUITABLE FOR IRREGULAR WORKPIECE.
RAPID SETTING & FIXED.

PADS:

6 PADS For different work piece shape

ORDER NO.	SIZE	CODE NO.
VSJ-1A	Ø25xØ11x10mm	1014-030
VSJ-2A		1014-031
VSJ-3A		1014-032
VSJ-4A		1014-033
VSJ-5A		1014-034
VSJ-6A		1014-035

ORDER NO.	SET INCLUDING		WEIGHT K.G.	CODE NO.
	JACKS	PARTS EACH ONE		
VSJ-A	VSJ-70x2 VSJ-150x2	VSJ-1A, VSJ-2A, VSJ-3A VSJ-4A, VSJ-5A, VSJ-6A	4.0	1014-020
VSJ-B	VSJ-150x2 VSJ-250x2	VSJ-1A, VSJ-2A, VSJ-3A VSJ-4A, VSJ-5A, VSJ-6A	7.5	1014-021

U-Clamp

PAIR

- Material: S45C
  Easy adjustment

ORDER NO.	STUD	LxWxH	K.G.	CODE NO.
VCA-404	M12x5”	105x45x35mm	1.5	1015-001
VCA-405	M16x6”	126x54x40mm	2.6	1015-002
VCA-406	M20x7”	155x58x55mm	4.2	1015-003
VCA-408	M24x8”	190x70x65mm	8.2	1015-004

Pivot Clamp

PAIR

- The clamping height is adjustable
- With brass plate under the clamp arm for potecting the working material from damage
- By using spherical Flange nut, it will be assured to clamp the material tightly
- The clamping arm is forged
- Material: S45C

ORDER NO.	Table T-Slot Size	Stud X L Size	Body	Clamping height	G.W.	CODE NO.
VCB-404	16	M12x5”	115x42x39	0 or 3 1/2″	1.6	1015-005
VCB-405	20	M16x6”	133x50x49	0 or 4”	2.7	1015-006
VCB-406	22	M20x7”	157x60x54	0 or 4 3/4″	4.6	1015-007
VCB-408	28	M24x8”	7x2 $^{7}/_{8}$	0 or 6”	8.6	1015-008

Hand Drift

ORDER NO.VHD-1 CODE NO.1016-001

An essential tool for machinery processing

Specially applied for: Vertical drill, radial drill, compounding miller, boring miller, and any drill drifting, etc.

- Easy and fast operation.
- Enhance the working efficiency.
- Protect toolings to be safe.
- Economical, practical & durable.

Suit For Spindle Notes	Length	30pcs/Box Size	30pcs/ Carton Size	N.W.(kg)
M.T.#2 #3 #4 #5	375mm	385x45x37mm	390x270x240mm	1.3

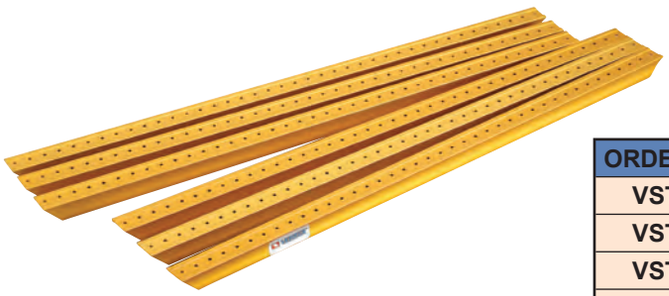
Eye Shield

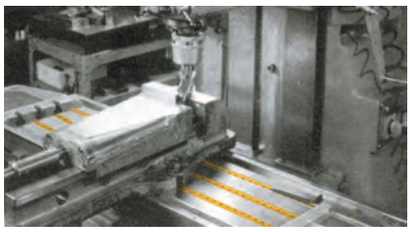
ORDER NO.VH-56 CODE NO.1017-001

- The clamping height is adjustable
  With brass plate under the clamp arm for protecting the working material from damage

GUIDER SIZE	K.G.
300x180x2	1

Milling Table Slot Cover

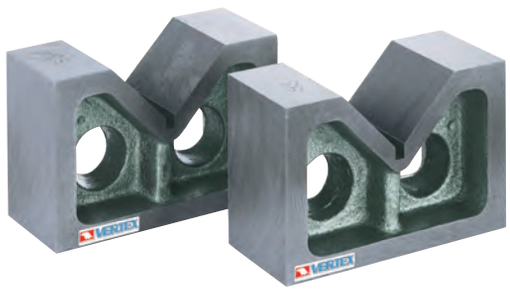




- Save time cleaning chips from machine
- Protects table slots
- Prevents chips from interfering with coolant flow
- Made of hand anodized aluminum, Light weight.

ORDER NO.	Table Slot	L	Set	WEIGHT(kg)	CODE NO.
VST-10	10	300	6PCS	0.1	1018-011
VST-12	12	400	6PCS	0.4	1018-012
VST-14	14	400	6PCS	0.5	1018-013
VST-16	16	400	6PCS	0.5	1018-001
VST-18	18	450	6PCS	0.6	1018-002
VST-20	20	500	10PCS	1	1018-003
VST-22	22	1000	5PCS	1.1	1018-004
VST-24	24	1000	5PCS	1.2	1018-005
VST-28	28	1000	5PCS	1	1018-006
VST-36	36	1000	5PCS	1.1	1018-007

Vee Blocks



MACHINED ONLY

Material: High quality close-grained cast iron, strees-relieved.

Accuracy: Machining to 0.03mm/100mm

ORDER NO.	Length	Width/Set	Height	V-Width	V-Depth	Weight(kgs)/Set	CODE NO.
V-2V	51mm	48mm	32mm	25mm	12.5mm	0.5	1019-001
V-3V	76mm	62mm	53mm	34mm	17mm	1.5	1019-002
V-4V	102mm	82mm	60mm	48mm	24mm	2.5	1019-003
V-5V	126mm	102mm	79mm	58mm	29mm	4.3	1019-004
V-6V	150mm	124mm	88mm	80mm	40mm	6.4	1019-005
V-7V	178mm	152mm	115mm	92mm	46mm	12	1019-006
V-8V	202mm	174mm	140mm	114mm	57mm	16.7	1019-007

Auto Center Punch

ORDER NO.VACP-1 CODE NO.1019-020

L: 120MM

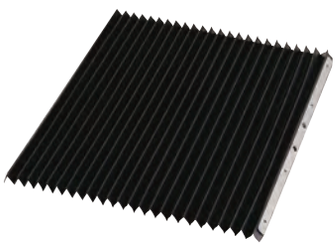
Automatic point marker is the best tool final the central point before punching. It's operated to aim at the central line and be pressed downward; the central point will appear. The size of the point can be adjusted by the pressure lid, no need to use hammers.

- G.W. : 0.1kgs

Draw Bar

ORDER NO.	DRAW BAR THREAD	LENGTH mm		WEIGHT (kg)	CODE NO.
		STEPS (S) TYPE	VARIABLE (A) SPEED		
VDR-R8-S	7/16-20NC	518	598	0.5	1020-001
VDR-R8-A				0.8	1020-002
VDR-NT302-S	1/2-12NC	555	635	0.6	1020-003
VDR-NT302-A				0.9	1020-004
VDR-NT303-S	1/2-13NC	555	635	0.6	1020-005
VDR-NT303-A				0.9	1020-006
VDR-NT30M-S	M12x1.75P	555	635	0.6	1020-007
VDR-NT30M-A				0.9	1020-008
VDR-NT40I-S	5/8-11NC	545	630	1	1020-009
VDR-NT40I-A				1.3	1020-010
VDR-NT40M-S	M16x2.0P	545	630	1	1020-011
VDR-NT40M-A				1.3	1020-012

Expandable Machine Guard Cover



F IS FOR FRONT (X)
B IS FOR BACK (Y)
(MILLING MACHINE)
B SERIES RUBBER IS PLANE TYPE.

ORDER NO.	WxL	SUITFUL MILLING SINE	WEIGHT (kg)	CODE NO.
VGC-3833F	380x330	1.5#	0.3	1021-001
VGC-3860F	380x600	1.6# 1.7#	0.6	1021-002
VGC-4550F	450x500	1.6#	0.7	1021-003
VGC-3775B	370x750	1.5#	0.7	1021-004
VGC-4585B	450x850	1.6# 1.7#	1.1	1021-005
VGC-6085B	600x850	2.0#	2	1021-006

5C. C32. OZ25 Collet Rack

ORDER NO.VMS-5 CODE NO.1021-050

SIZE: 220x110x6 mm
MATERIAL:PLASTIC
G.W.: 0.2 kgs

Parts Storage

COLOR: RED, BLUE, YELLOW

ORDER NO.	SIZE	PACKED	EACH WEIGHT (kg)	CODE NO.
VHB-1218	120Wx180Dx80H mm	60 PCS/CASE	8.6	1021-100
VHB-1525	150Wx250Dx120H mm	36 PCS/CASE	9.6	1021-101
VHB-2035	200Wx350Dx150H mm	18 PCS/CASE	0.585	1021-102
VHB-2045	200Wx450Dx177H mm	12 PCS/CASE	0.8	1021-103
VHB-3045	300Wx450Dx177H mm	8 PCS/CASE	1.8825	1021-104
VHB-1015	100Wx150Dx80H mm	80 PCS/CASE	0.074	1021-105
VHB-1220	120Wx200Dx80H mm	60 PCS/CASE	6.7	1021-106
VHB-1526	150Wx260Dx128H mm	36 PCS/CASE	0.201	1021-107

Universal Cutter Grinder

ORDER NO.U2 CODE NO.1022-001

For grinding HSS and carbide engraving cutter as well as single lip or multiple lip cutters of various shapes such as radiused cutters or negative taper angle of cutters. The universal index head is provided at 24 positions so that any particular angle or shape can be obtained, free 3600 or 100 rotation is allowed for grinding End Mills. Twist Drill. Lathe Tools, only replace the attachment to the index head without any complex setup.

Technical Data

Max. Collet capacity Ø18mm
Max. Grinding dia. Ø25mm
Taper angle 0º-180º
Relief angle 0º-45º
Negative angle 0º-26º
Grinding spindle 3600 r.p.m.
Cup grinding wheel 100x50x20mm
Motor 1/3Hp 220V50/60Hz, please notify volt & phase
Net weight 45kgs
G.W.: 58kgs
Machine dimensions (LxWxH) 45x40x35cm
Packing Dimensions (LxWxH) 55x45x47cm

Standard Accessory Included

- Wheel dresser with diamond..... 1pc
- Wheel flange (mounted)..... 1pc
- Grinding wheel.....1pc (U2-G)
- Collet Ø4, 6, 8, 10 12mm..... 5pc
- Aligning finger.....1pc
- Drive belt (U2-B).....1pc (U2-B)
- Lock pin.....1pc
- Tools.....1set

Optional Accessory

- Twist drill grinding attachment U2-T
- END mail grinding attachment U2-E
- Lathe tool grinding attachment U2-L
- Grinding wheel balancing stand LBS-100 CODE NO. 2014-010
- Diamond grinding wheel U2-D
- Resinoid Diamond & CBN Wheels U2-R
- Collect (extra 1, 2, 2.5, 3, 5, 7, 9, 16, 18, 20, 25mm and 1/8", 3/16", 1/4", 5/16", 3/8", 1/2", 5/8"). Detail specification & ORDER No. shown on page U2 collet.

ORDER NO.	CODE NO.
U2-E	1022-010
U2-T	1022-011
U2-L	1022-012
U2-D #100	1022-013
U2-B BELT	1022-014
U2-C CABINET	1022-015
U2-G WHEEL	1022-016
U2-R #200	1022-017
U2--R-1 #400	1022-017-1

WEIGHT: 2kg

CODE NO. 1022-010 U2-E
END mill grinding attachment

WEIGHT: 0.9kg

CODE NO. 1022-011 U2-T
Twist drill grinding attachment

- Tool cabinet stand U2-C, 900x500x400mm G.W.:40kgs CODE NO. 1022-015

WEIGHT: 0.9kg

CODE NO. 1022-012 U2-L
Lathe tool grinding attachment

U2-D
WEIGHT: 0.7kg
1022-013

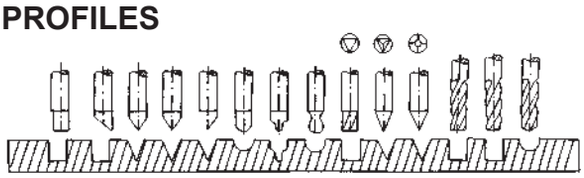
U2-R
WEIGHT: 0.5kg
1022-017

CODE NO. 1022-013
diamond grinding wheel
CODE NO. 1022-017
Resinoid Diamond & CBN Wheels

DIAMOND GRINDING WEEL

ORDER NO.	SIZE	GRAIN
U2-D	100Dx10Wx5Ux20Hx22T	#100
U2-R	100Dx8Wx2Xx20H	#200
U2-R-1	100Dx8Wx2Xx20H	#400

ENGRAVING AND MILLING CUTTER PROFILES



Chamfering & Deburring Unit

SPMN 1203

VCF-500
Accessory: Side Mill Cutter Insert SPUN 422

ORDER NO.	CODE NO.
VCF-500	1023-001
VCF-500W	1023-002
VCF-500F	1023-003

PRACTICAL

A. UNIVERSAL APPLICATION.
B. SIMPLIFIED OPERATION.
C. FAST-ACCURATE-RATIONAL.
D. TIME SAVED.

VCF-500W
Accessory: Grinding Wheel
100Øx50x17Ø

FEATURES FOR VCF-

1. Simplified operation,
   suitable for unskilled personnel.
2. Easily to be bevelled for any length
   made of steel, cast iron, nonferrous
   metals, plastics, acrylic etc.
3. 500 : With exchangeable carbide insents, knife can be changed easily to decrease cost and increase working ability.
4. 500W: With taper wheel or flange hot-processed parts also can be bevelled or chamferred.
5. 500F : Working base on surface milling principles, the deburring procssing surface is same as the milling machine surface.

VCF-500F
Accessory: Face Milling Cutter
Insert SEKN 1203

TECHNICAL DATA

Space requirement	500	500W	500F
	500x320m/m	500x440m/m	500x220m/m
Weight(kgs)	28.5	29.1	29
Voltage	3Ø 220V or 1Ø 110V/220V 50HZ/60HZ 3Ø 380V/415V		
Motor output	0.7KW		
Speed	3500 r.p.m		
Lenght of guide rails	500/m/m	500m/m	500m/m
Height of bevel	0-3m/m		
Bevel angle	15°~45° (Changable)	45°	45°

PLEASE NOTIFY VOLTAGE & PHASE, WHEN YOU ORDERING.
C.E MARK REQUESTED

Chamfering & Deburring Unit

ORDER NO.	CODE NO.
VCF-500S	1023-004
VCF-600	1023-005
VCF-700	1023-006

VCF-500S
Accessory: Sanding Disc
165Øx22Ø

PRACTICAL

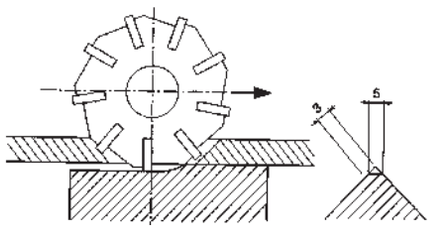
A. USING SAND-CLOTH ROLLER FOR CUTTING.
B. GOOD FOR STEEL. CAST IRON HARDEN PARTS.
C. NOT FOR SOFT IRON OR ALUMINUM.
D. IF USED BENT WORKPIECE, THE CHAMFERING SURFACE WOULD NOT SMOOTHLY STRAIGHT.

VCF-600
Insert SPMW 321
ZSPMW 090308

FEATURES FOR VCF-

1. 500S: Uses sanding disc, can debur soft and rigid materials.
2. 600 : Easy to carry and time-saving. suitable for heavy workpiece which can't be easily moved. The tools can be chamfered 0-3mm bevel angle, radius, arc angle, irregular shape. straight line, outer curve and etc.
3. 700 : The machine is used to carry out chamfering operations on any kind of ferrous material in particular steel and cast iron. Equipped with square-shaped tungsten carbide inserts-12.7x12.7x3.18 ISO 1203 SPUN. Simplified operation suitable for unskilled personnel. 3Ø220V/3Ø380V

VCF-700
Side mill cutter



TECHNICAL DATA

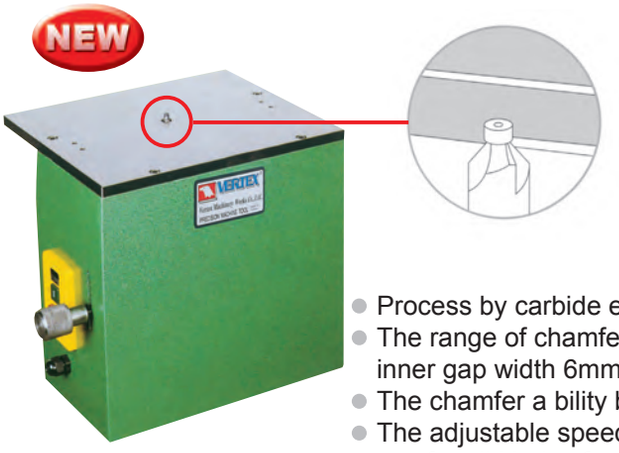
	VCF-500S	VCF-600	VCF-700
Space requirement	330x410	380x130	360x200x260
Weight(kgs)	26	3.7	14
Voltage	3Ø220V or	1Ø110V/220V 3Ø380V/415V	50HZ/60HZ
Motor output	0.7KW		0.37KW
Speed	3500 r.p.m	12000 r.p.m	3500 r.p.m
Lenght of guide rails	320m/m	100m/m	200m/m
Height of bevel	0-3m/m	0-3m/m	0-7m/m
Bevel angle	45°	45°	15°~45° Adjustable

PLEASE NOTIFY VOLTAGE & PHASE, WHEN YOU ORDERING.

Chamfering & Deburring Unit

ORDER NO.VCF-300A CODE NO.1023-007

NEW



- Process by carbide end mill.
- The range of chamfer: inner dia. 6mm, inner gap width 6mm and 3R arc.
- The chamfer a bility by: 2C/2R.
- The adjustable speed (0-6000rpm) can use for all kinds of materials cutting. (except harden parts)
- This machine was designed for regular and irregular parts such as curved surface, inner gap, and complex of inner and outter parts.
- All bevel angle comes to 45º by 45º carbide end mill.

SPECIFICATION

Accessory	Carbide end mills
Machine size	L330mm x W330mm x H300m
Voltabe	1ø, 220V; 50Hz/60Hz
Speed	0~6000 r.p.m.
Distance of Bevel	0~3mm
Bevel angle	45º
N.W. / G.W.	30kgs / 34kgs
Box size	550mm x 440mm x 380mm
Motor	0.5HP
Track Size	300mm x 250mm x 10mm

Ejector Pin Cutting-off Unit

ORDER NO.VEC-100 CODE NO.1024-001

A PRECISE & SHARP CUTTING TOOL FOR MOULD MAKING LINE

Features

- Moveable shaft bearing easy operation, safety.
- For cutting ejector pin of mould. or machine key. round rod.
- Heat-Treatment materials.
  Good-Looking cutting surface of stainless steel.
- Handle device according law of lever, it's easy to move on.
- Cause no vibration, no dust and noiseless.
- Easy to exchange the emery wheel.

ABLE TO CUT ALL THE MATERIAL WITH PLANE SURFACE ALMOST

SPECIFICATION

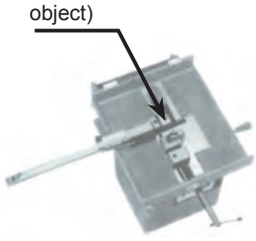
Unit:mm

MAX. CUTTING CAPACITY	Ø25x300L
CUTTING TOLERANCE	20 ± 0.10MM
EMERY WHEEL	150MM (O.D.)
	1MM (THICK)
	19.05MM (HOLE)
R.P.M	3600
MOTOR	1/2HP
MEASURE RULE	300MM
WEIGHT (APPROX.)	94.5KGS
MACHINE SIZE	620x420x450MM
PACKING SIZE	720x520x600MM

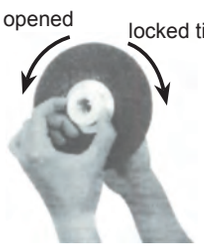
PLEASE NOTIFY THE VOLTAGE & PHASE, WHEN YOU ORDERING.

STANDARD ACCESSORIES
Emery wheel (Ø150x1x 19.05mm) 5 PCS

LARGE & SMALL V SLOT
(For clamping round object)



EMERY WHEEL ASSEMBLY BY HAND



Rods Precision Cutting-Off And End Surface Grinding Unit

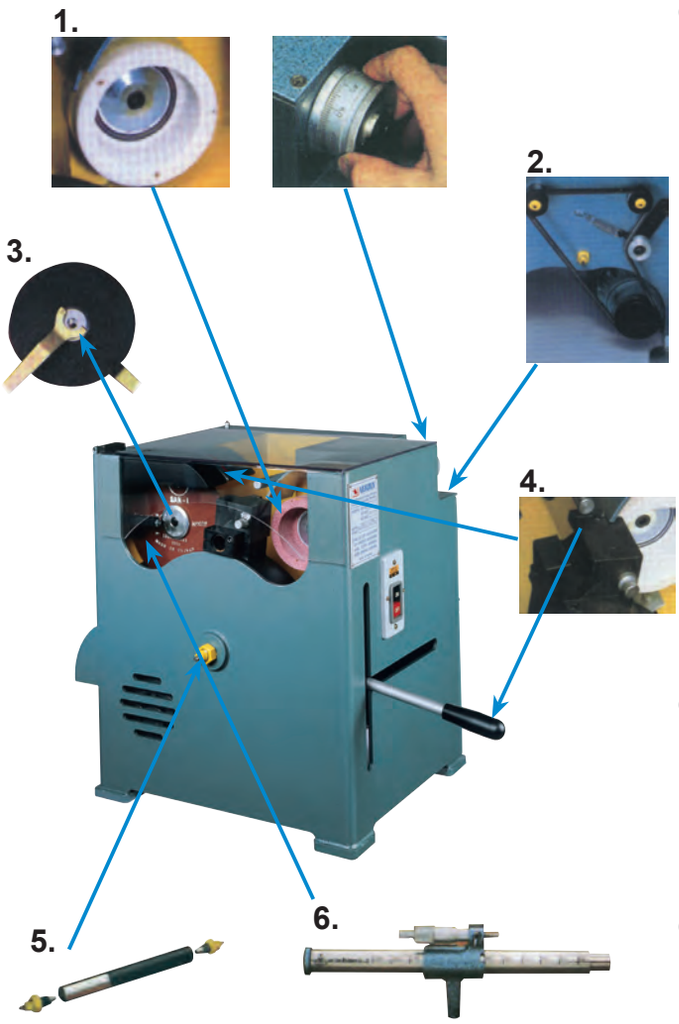
ORDER NO.	CODE NO.
VEC-300G	1024-010
VEC-500G	1024-011
VEC-600G	1024-012

For Clamping

For Cutting & Grinding

Features

- During operation, the grinding sander may be micro adjusted and repaired without changing its dimensions.
- The tigtness of belt may be automatically adjusted and controlled (the larger the resistance, the tighter the belt.)
- The dimensions precision of cutting off the length of working piece are not subject to the effect of the difference of thickness of cutting-off sander piece.
- The rapid chuck is used to hold the working piece in place, opening or closing it is very quick, and Ø1-25mm is the same.
- When operation, a shaft with two tapered ends is used for transmission and characterized by high stability low wearing rate and long life.
- The rapid positioning rule is in the unit of 20mm and provided with a micro rule (0mm to 25mm) of which the zeroing point is the dimensions at the rapid positioning point.
- The minimum of cutting length is 60mm



The measure rule

SPECIFICATION

Cut-off precision	25m/mø x 300m/m ± 0.01
Right-angle precision	25m/mø x 90° ±0.01
Cut-off sander lamina	1m/m t x 180m/mø (Hole) 31.8m/mø
Grinding sander	WA46K x100 x 50 x 20
R.P.M.	3600
Motor	3/4HP 110/220V 1 or 3 phase
Capacity	VEC-300G 300mm VEC-500G 500mm VEC-600G 600MM
Weight (Approx.)	105.5kgs (107kgs) (110kgs)
Machine Size	L430m/m x W360m/m x H500m/m

- The legth of measure: 300mm is for VEC-300G
  500mm is for VEC-500G
  600mm is for VEC-600G
  Except the measure rule length is different, all items of body are same.

- Please notify the voltage & phase, when you ordering

Dustproof Halogen Lamp Beams

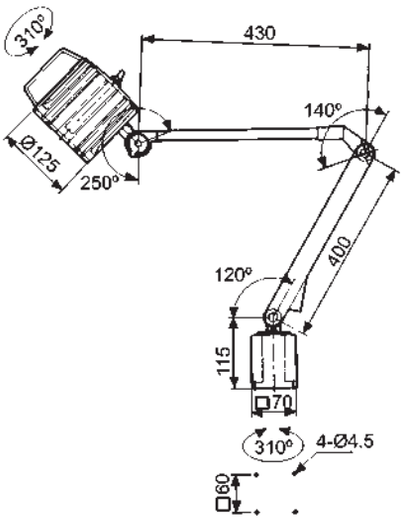
UNIVERSAL TYPE

- Fitted with coil transformer resisting unstable voltage.
- Long service life.

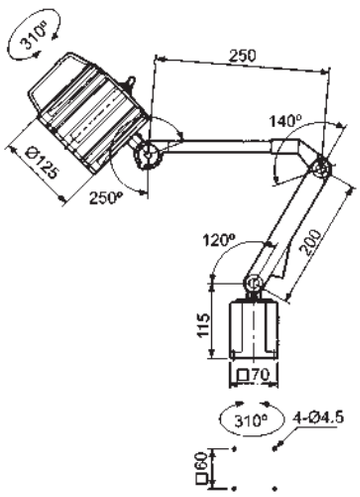
VHL-300L

VHL-300M

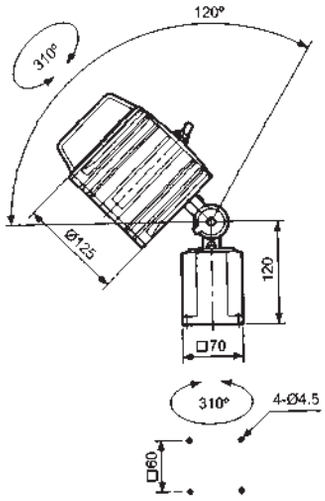
VHL-300S



VHL-300L
LONG ARM

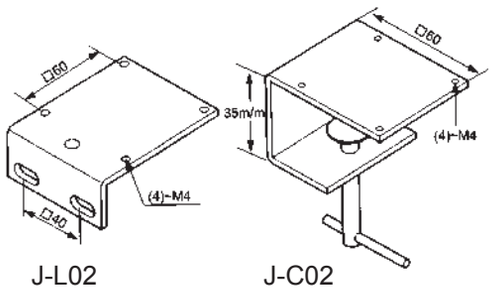


VHL-300M
MEDIUM ARM



VHL-300S
SHORT ARM

●OPTIONAL●



J-L02 J-C02

- MOUNTING ANGLE PLATE J-L02
- MOUNTING CLAMP J-C02

Totally enclosed lighting head provides well prevention for explosion, dust, coolant, and lubricants.
Uses efficient quartz halogen bulb, great light output, soft illuminating without irritating to the eyes.

Features

- Coil transformer built in base for directly connect to voltage of Ac power. (110V, 220V, 380V.....)
- Specify voltage as desired when ordering.
- It accepts bulb 50W
- Furnished with 1.8 meter cord with plug.

Unit:mm

ORDER NO.	ARM LENGTH L x ℓ	WEIGHT (kg)	CODE NO.
VHL-300L	430x400	2.4	1025-001
VHL-300M	250x200	2.1	1025-002
VHL-300S	1 JOINT	2.3	1025-003
J-L02		0.3	1025-004
J-C02		0.5	1025-005

Dustproof Halogen Lamp Beams

UNIVERSAL TYPE

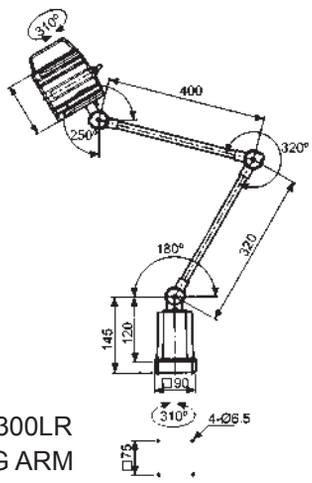
- Fitted with coil transformer resisting unstable voltage.
- Long service life.
- With Water proof articulated arm.
- Round tube arm provides great lighting angles.

VHL-300LR

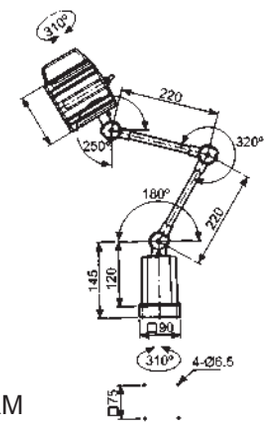
VHL-300MR

VHL-300SR

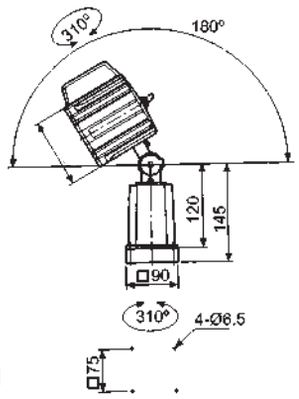
VHL-300 1/2MR



VHL-300LR
LONG ARM

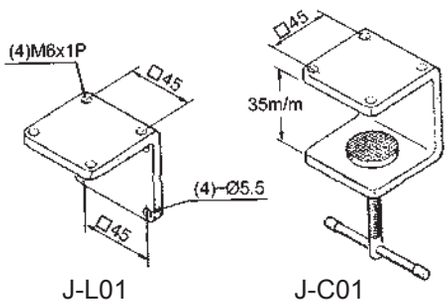


VHL-300MR
MEDIUM ARM



VHL-300SR
SHORT ARM

●OPTIONAL●



J-L01 J-C01

- MOUNTING ANGLE PLATE J-L01
- MOUNTING CLAMP J-C01

Totally enclosed lighting head provides well prevention for explosion, dust, coolant, and lubricants.
Uses efficient quartz halogen bulb, great light output, soft illuminating without irritaating to the eyes.

Features

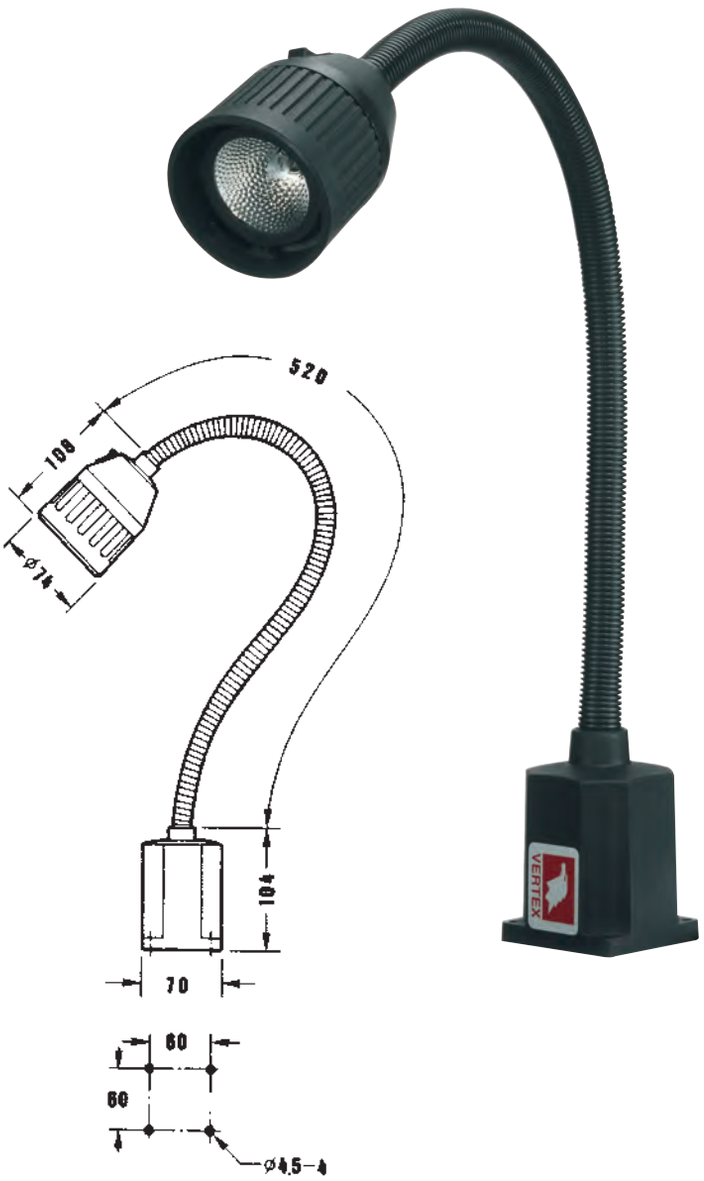
- Coil transformer built in base for directly connect to voltage of Ac power. (110V, 220V, 380V.....)
- Specify voltage as desired when ordering.
- It accepts bulb 50W, 55W, 70W.
- Furnished with 1.8 meter cord with plug.

Unit:mm

ORDER NO.	ARM LENGTH L x ℓ	WEIGHT (kg)	CODE NO.
VHL-300LR	400x400 (With Water proof)	4.4	1025-010
VHL-300MR	200x200 (With Water proof)	3.6	1025-011
VHL-300SR	1 JOINT (With Water proof)	2.9	1025-012
VHL-300 1/2MR	200 (With Water proof)	3.4	1025-013
J-L01		0.6	1025-014
J-C01		0.4	1025-015

Quartz Halogen Lamp Beams

- Gooseneck arm for smooth lighting angle adjustment.
- Lighting reaches any direction.



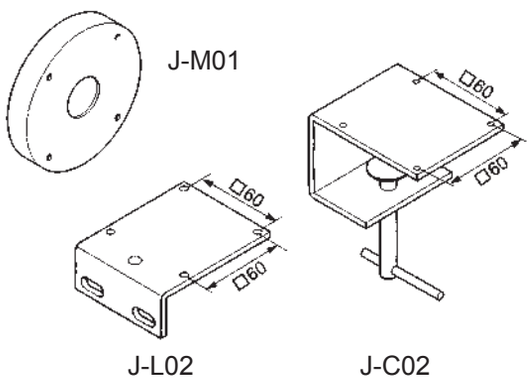
VHL-20FT SERIES

- Engineering plastic shade and base provides complete insulation for maximum operator safety.
- Power source available: Any voltage on customer's request. Such as 110V, 220V, 240V, 380V, 415V.
- Transformer built in base.
- Accept 20, 35 and 50 watt bulb. Included with 20 watt bulb, 35 and 50 watt bulb on request.
- Furnished with 1.8 meter (70″) cord.
- Available with magnetic base. (optional)
- Engineering mounting angle plate. (optional)
- Double shades designed permits fast heat dissipation.

VHL-20F SERIES

- The quartz halogen lamp has great light output, soft illuminating without irritating to the eyes.
- Low voltage 12 or 24 volt operation without danger of electric shock.
- The articulated arm provides vibration resistance performance.
- Use top quality electric components.
- Accept 20, 35, 50 watt bulb. Included with 20 watt bulb, 35 and 50 watt bulb on request.
- Complete with 1.8 meters (70″) cord.
- Economical model, jet quality constructed. Ideally suited to machine tools and machinery without big working area.
- Engineering plastic shade and base provides complete insulation.

●OPTIONAL●



J-L02 J-C02

- MAGNETIC SEAT
- MOUNTING CLAMP J-C02
- MOUNTING ANGLE PLATE J-L02

ORDER NO.	WEIGHT (kg)	CODE NO.
VHL-20FT	1.6	1025-020
VHL-20F	1.1	1025-021
J-M01	0.6	1025-006
J-L02	0.3	1025-004
J-C02	0.5	1025-005

Cool Light Beams

WATER RESIST

D SERIES

DB SERIES

- Outstanding Water-resist Performance

Separate ballast series

ORDER NO.	LAMP LENGTH	BULB LENGTH	WATT	DIA	WEIGHT (kg)	CODE NO.
VHL-W10D	518m/m	345m/m	10	70mm	3.2	1025-030
VHL-W15D	632m/m	451m/m	15	70mm	3.5	1025-031
VHL-W18D/PL	425m/m	195m/m	18	70mm	2	1025-032
VHL-W20D	765m/m	580m/m	20	70mm	3.6	1025-033
VHL-W36D/PL	621m/m	385m/m	36	70mm	2.9	1025-034
VHL-W40D	1835m/m	1200m/m	40	70mm	5.1	1025-035

FOUR MODELS TO CHOOSE FORM 10, 15, 20, AND 40 WATT. OUTSTANDING FEATURES

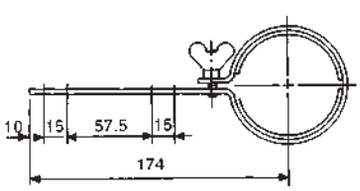
Built-in ballast series

ORDER NO.	LAMP LENGTH	BULB LENGTH	WATT	DIA	WEIGHT (kg)	CODE NO.
VHL-W10DB	611m/m	330m/m	10	70mm	3.2	1025-040
VHL-W15DB	717m/m	436m/m	15	70mm	3.5	1025-041
VHL-W18DB/PL	525m/m	195m/m	18	70mm	2	1025-042
VHL-W20DB	861m/m	580m/m	20	70mm	3.6	1025-043
VHL-W36DB/PL	715m/m	385m/m	36	70mm	2.9	1025-044
VHL-W40DB	1529m/m	1200m/m	40	70mm	5.1	1025-045

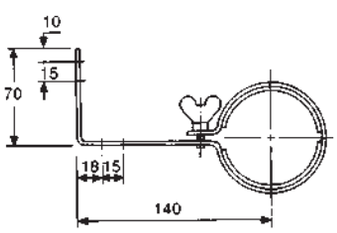
- Suited for machine lighting. indoor and outdoor lighting.
- Cool lighting performance.
- Anti-crack lamp.
- Swivelling mounting bracket (opional).
- Accommodates power source 110V or 220V. single voltage only.
- Specify HZ and voltage when ordering.
- The outer tube is manufactured from acrylic. When requested. the glass outer tube is available.
- Furnished with 1.8 meter (70″) cord.

OPTIONAL

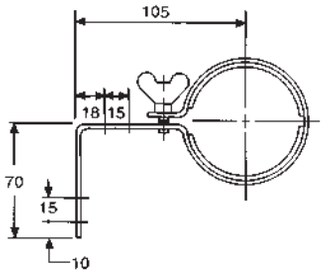
ORDER NO.	WEIGHT (kg)	CODE NO.
JF-110	0.6	1025-050
JF-111	0.6	1025-051
JF-112	0.6	1025-052
JF-115	0.1	1025-053



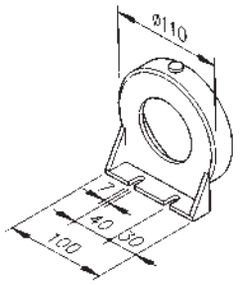
- JF-110 MOUNTING FIXTURE



- JF-111 MOUNTING FIXTURE



- JF-112 MOUNTING FIXTURE



- JF-115 MOUNTING STAND

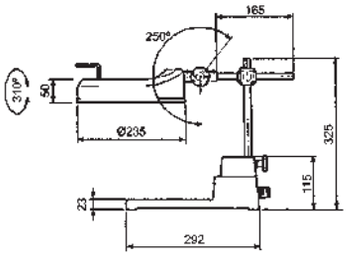
Magnifying Fluorescent Work Light Beams

VHL-30TEB
BENCH TYPE

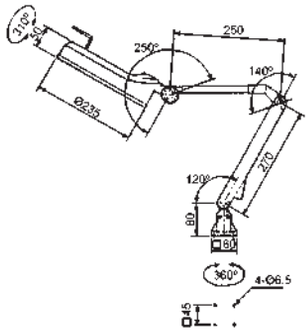
VHL-30MEB

3X auxiliary lense (optional)

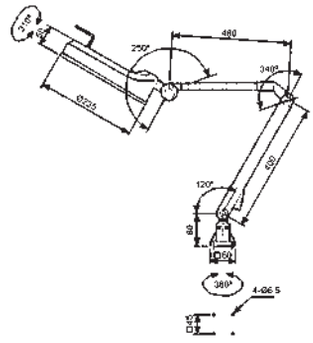
VHL-30LEB



VHL-30TEB BENCH TYPE



VHL-30MEB MEDIUM ARM



VHL-30LEB LONG ARM

VHL-30TEB

- Bench type model.
- Constructed with a wide base for placing object, allowing it especially suited for inspection lighting.
- Electronic ballast is built in arm.
- Accepts 22 watt fluorescent tube.
- 110V, or 220V operation. Supplied single voltage only. Specify desired voltage when ordering.
- Furnished with 1.8 meter cord with plug. Extended cord length is available when required.

Designed with a magnifier lense on luminaire head giving 3 times of magnification 3x than acrual object. The fluorescent lighting provides day light effect without flash.

VHL-30 MEB

- Medium arm model.
- Electronic ballast is built in arm.
- Accepts 22 watt fluorescent tube.
- 110V, or 220V operation. Supplied single voltage only. specify desired voltage when ordering.
- Furnished with 1.8 meter cord with plug. Extended cord length is available when required.

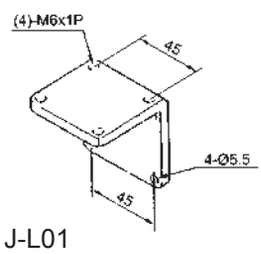
VHL-30 LEB

- Long arm model.
- Electronic ballast is built in arm.
- Accepts 22 watt fluorescent tube.
- 110V, or 220V operation. Supplied single voltage only. Specify desired voltage when ordering.
- Furnished with 1.8 meter cord with plug. Extended cord length is available when required.

●OPTIONAL●

ORDER NO. VHL-3X
3X magnifier lense

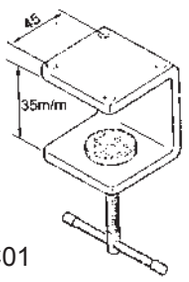
●OPTION



J-L01

MOUNTING ANGLE PLATE

●STANDARD ACC.



J-C01

MOUNTING CLAMP

ORDER NO.	WEIGHT (kg)	CODE NO.
VHL-30TEB	3.5	1025-060
VHL-30MEB	2.9	1025-062
VHL-30LEB	2.9	1025-063
J-L01	0.6	1025-014
VHL-3X	0.3	1025-065

- All work lights are with 3X magnifier lense, If you need 6 times, you have to choose VHL-3X extraly.

Water-Proof Halogen Lighting Beams

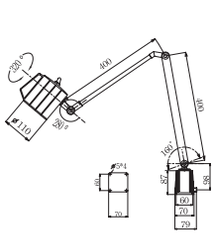
400 SERIES

VHL-400L

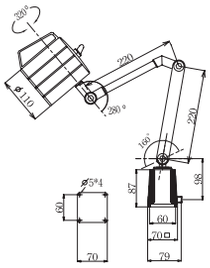
VHL-500S

500 SERIES

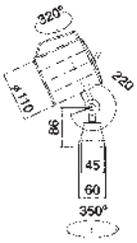
VHL-500L



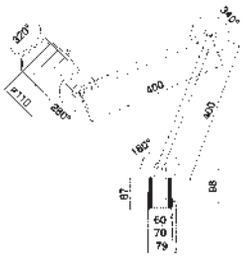
VHL-400L



VHL-400M

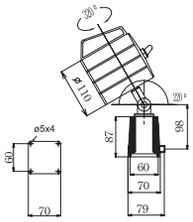


VHL-400S



VHL-500L

VHL-500M



VHL-500S

VHL-400L

- Water-proof lighting head with reinforced glass resists big temperature fluctuations of cutting oil.
- 12V/24V Voltage.
- Flexible Arm (round arm), 400x400mm
- With universal Lighting Base.
- Specifications of Bulb: 12V/50W.
- Different conditions demand different lighting bases. Selected rectangular L-type (#V-20) base or C-type (#V-21) base.

VHL-400M

- Perfomance & features: same as, but with shorter fiexible arm at 220x185mm.

VHL-400S

- Specially designed to fit particular locations and spaces, The flexible arm is very short.

VHL-500L

- Performance & features of these series: same as. The main difference is that VHL-500L can be installed with a shorter arm, and connected with AC current below 240V.
  Please indicate the required voltage when placing the orders to us.
- Specitications of the bulb: 12V/50W

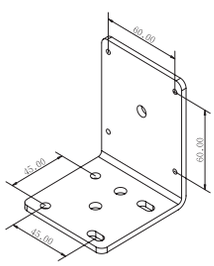
VHL-500M

- Sam specifications as VHL-500L, but with shorter flexible arm at 220x220mm.

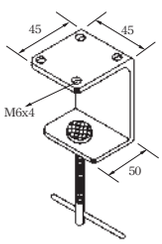
VHL-500S

- Specilly designed to fit particular locations and spaces. The flexible arm is very short.

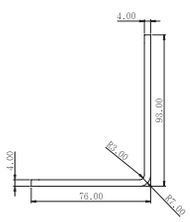
●OPTIONAL●



V-20



V-21



V-26

WATER-PROOF HALOGEN LIGHTING LAMP (VHL-400L SERIES)

LIGHTING HEADS OF THESE SERIES WITH SPECIFIC FEATURES OF WATER-PROOF, DUST-FREE, ANTI-LUBRICAT, ANIT-CUTTING OIL, ETC.
THE LIGHTING UNITS ADPOTED WITH A BULB (12V/50W).
CUSTOMERS' SPECIFICATIONS ALSO ACCEPTED.

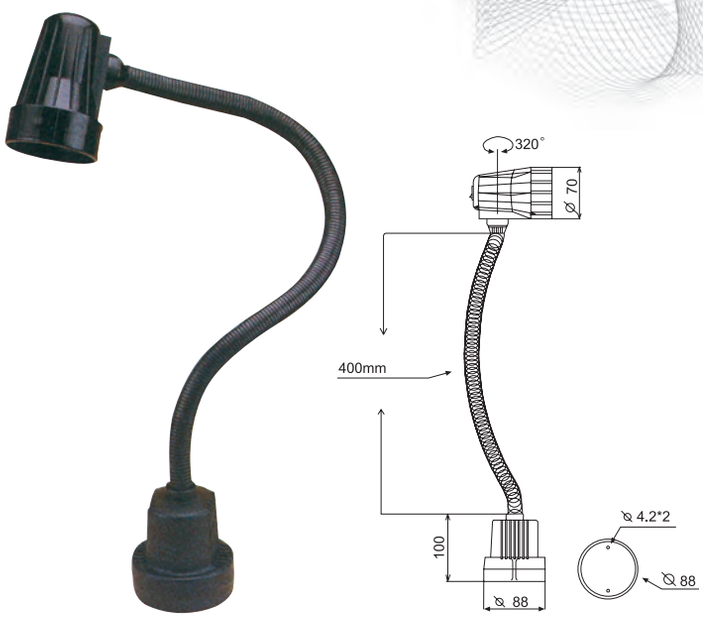
ORDER NO.	WEIGHT (kg)	CODE NO.
V-20	0.28	1025-106
V-21	0.48	1025-107
V-26	0.19	1025-108

ORDER NO.	VOLTS	BULB	ARM LENGTH L x ℓ	OPTIONAL ACCESSORIES	WEIGHT (N.W.)	CODE NO.
VHL-400L	110V - 220V	12V 50W	400x400	V-26	3.8	1025-100
VHL-400M	110V - 220V	12V 50W	220x220	V-26	3.5	1025-101
VHL-400S		12V 50W		V-20 / V-21	2.8	1025-102
VHL-500L	110V - 220V	12V 50W - 24V 50W	400x400	V-26	4	1025-103
VHL-500M	110V - 220V	12V 50W - 24V 50W	200x220	V-26	3.8	1025-104
VHL-500S	110V - 220V	12V 50W - 24V 50W		V-26	2.7	1025-105

Dustproof Halogen Lamp Beams

WITH TRANSFORMER & MAGNETIC BASE

VHL-600FT



VHL-700FT

Features

- VHL-600FT, VHL-700FT type ideal for work-place lighting if bright concentrated light is required in performance not too large area illumination. Built in transformer.
- Suitable for use at small machine such as CNC engraving machine, sewing machine, lathe machine, working benches and working table.....etc.
- VHL-700FT with flexible arm.

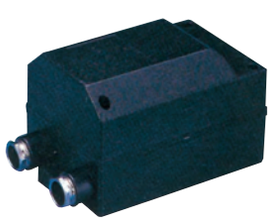
ORDER NO.	VOLTS	BULB	ARM LENGTH L x ℓ	OPTIONAL ACCESSORIES	WEIGHT N.W.(KGS)	CODE NO.
VHL-600FT	110V - 220V	12V 20W	380	M-23	1.7	1025-109
VHL-700FT	110V - 220V	12V 20W	400	M-23	1.7	1025-110

V-B15		12V 50W / 24V 50W			0.009	1025-111
V-B16		12V 55W / 24V 70W			0.009	1025-112
V-T17	415V - 12 / 415V - 24 380V - 12 / 380V - 24 230V - 12 / 230V - 24				1.47	1025-113
V-T18	415V - 12 / 415V - 24 380V - 12 / 380V - 24 230V - 12 / 230V - 24				1.4	1025-114

V-T17

TRADITIONAL TRANSFORMER V-T17 SUITABLE FOR VHL-400 SERTES VHL-500 SERTES

V-T18



EXTERIOR DUST-FREE TRANSFORMER V-T18 Voltage below 415V. Can be installed anywhere. Dust-Free, leakage-proof and oil-proof.

V-B15

V-B15
12V/50W, 24V/50W
Those bulb for VHL-400, VHL-500 series

V-B16

V-B16
24V/70W, 12V/55W
Those bulb for VHL-400, VHL-500 series

Water Proof LED Lamp

ENERGY SAVING

UNIVERSAL TYPE

NEW

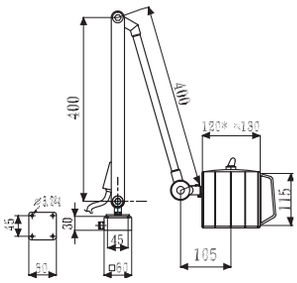
VLED-400L

VLED-400M

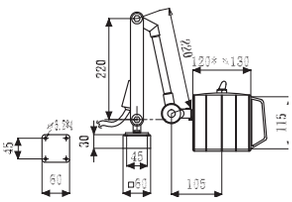
VLED-500L

VLED-500M

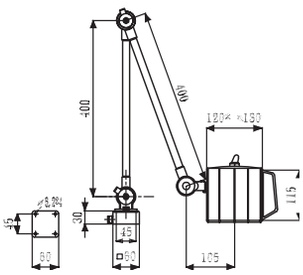
VLED-500S



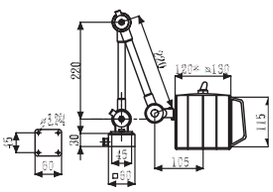
VLED-400L



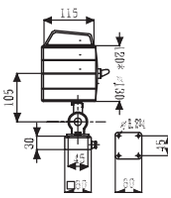
VLED-400M



VLED-500L



VLED-500M



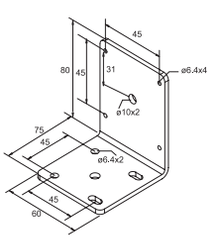
VLED-500S

Features

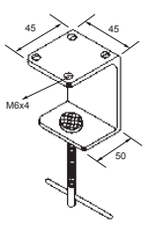
- Energy saving
- Luminous flux: 430~560 lumen
- LED light long service life
- 1 year guarantee
- 1.8 meter coil
- White light
- No high heat produce
- Dust/water proof
- Specify voltage when ordering
- For any working place, stable quality
- Suit for CNC, engraving, drill press machine, lathe, wood and mold industry

ORDER NO.	VOLTS	BULB	ARM		WEIGHT N.W.(KGS)	CODE NO.
			L x ℓ	TUBE STYLE		
VLED-400L	110V / 220V	13W	400 X 400	SQUARE	3	1025-130
VLED-400M	110V / 220V	13W	220 X 220	SQUARE	2.8	1025-131
VLED-500S	110V / 220V	13W	JOINT	ROUND	3.4	1025-132
VLED-500L	110V / 220V	13W	400 X 400	ROUND	3.2	1025-136
VLED-500M	110V / 220V	13W	220 X 220	ROUND	1.8	1025-137

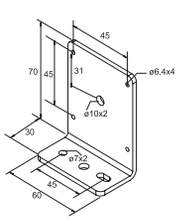
●OPTIONAL●



V-20



V-21



V-22

Totally enclosed lighting head provides well prevention for explosion, dust, coolant, and lubricants.

- LED13W
  High lumen 430~560
  Led light bulb

OPTIONAL ACCESSORIES

ORDER NO.	WEIGHT (kg)	CODE NO.
V-20	0.28	1025-106
V-21	0.48	1025-107
V-22	0.16	1025-119
LED13W	0.14	1025-141

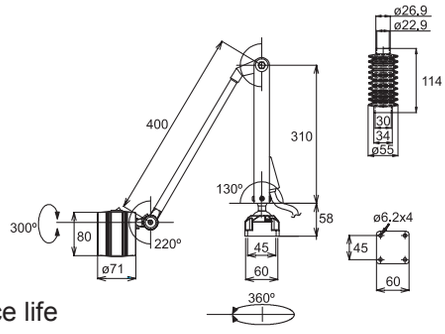
Concentrate LED Lamp

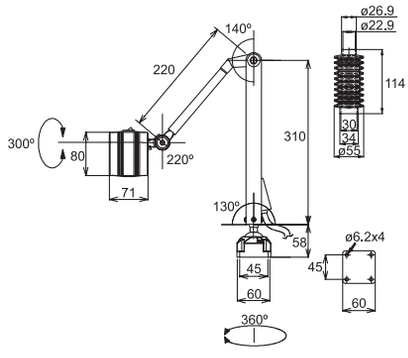
UNIVERSAL TYPE

NEW

VLED-30L

VLED-30M



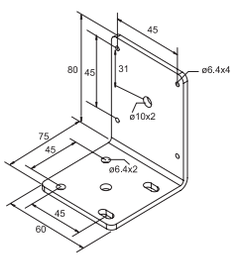


Features

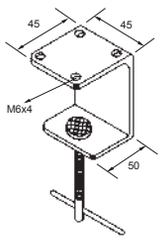
- Energy saving
- LED light long service life
- 1 year guarantee
- Luminous flux: 250~330 lumen
- No high heat produce
- Dust proof
- Flexible & folding arm
- Built-in transformer
- Suit for small CNC, engraving, sewing machine, drill press, lathe, and working table

ORDER NO.	VOLTS	BULB	ARM L x ℓ	WEIGHT N.W.(KGS)	CODE NO.
VLED-30L	INPUT: 220V OUTPUT: AC / DC 12V	12V 6W	400 X 310 mm	2	1025-125
VLED-30L	INPUT: 110V OUTPUT: AC / DC 12V	12V 6W	400 X 310 mm	2	1025-126
VLED-30M	INPUT: 220V OUTPUT: AC / DC 12V	12V 6W	220 X 310 mm	1.8	1025-127
VLED-30M	INPUT: 110V OUTPUT: AC / DC 12V	12V 6W	220 X 310 mm	1.8	1025-128

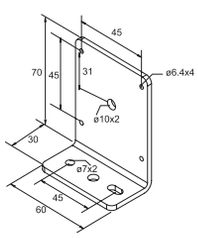
●OPTIONAL●



V-20



V-21



V-22

- LED6W
  Led light bulb
  250~330 lumen

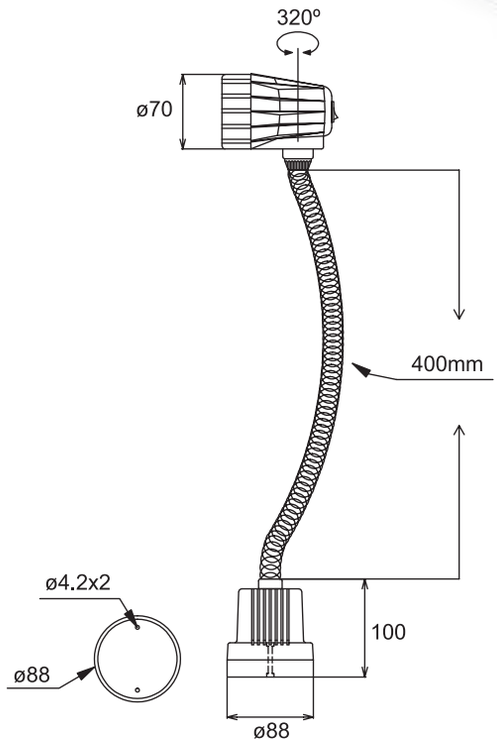
OPTIONAL ACCESSORIES

ORDER NO.	WEIGHT (kg)	CODE NO.
V-20	0.28	1025-106
V-21	0.48	1025-107
V-22	0.16	1025-119
LED6W	0.14	1025-140

Concentrate LED Lamp

WITH TRANSFORMER

NEW

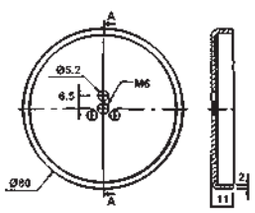


Features

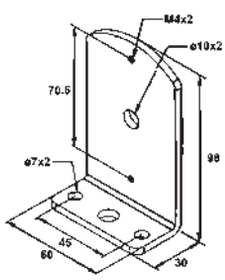
- Energy saving
- LED light long service life
- 1 year guarantee
- Luminous flux: 250~330 lumen
- No high heat produce
- Dust proof
- Flexible & folding arm
- Built-in transformer
- Suit for small CNC, engraving, sewing machine, drill press, lathe, and working table

ORDER NO.	VOLTS	BULB	ARM L x ℓ	WEIGHT N.W.(KGS)	CODE NO.
VLED-20L	INPUT: 220V OUTPUT: AC / DC 12V	12V 6W	400 mm	1.2	1025-120
VLED-20L	INPUT: 110V OUTPUT: AC / DC 12V	12V 6W	400 mm	1.2	1025-121

●OPTIONAL●



V-23



V-27

- LED6W
  Led light bulb
  250~330 lumen

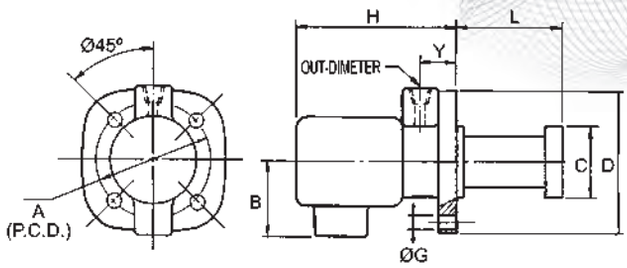
OPTIONAL ACCESSORIES

ORDER NO.	WEIGHT (kg)	CODE NO.
V-23	0.27	1025-117
V-27	0.21	1025-118
LED6W	0.14	1025-140

1/8 HP. Under Water Coolant Pump

Features

This is the pump in best quality with anti-rust treatment, use high grade material for the complete set and has been duly inspected in five steps by precision electron device.



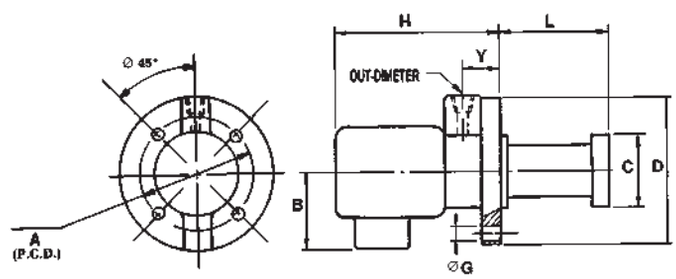
Unit:mm

POWER	A	B	C	D	G	H	Y	OUT-DIMETER
1/8 HP	128±0.2	105	Ø92	Ø155	Ø8	160	19	PT 3/8

Unitl:mm

ORDER NO.	TYPE	POWER	L m/m	PUMPING WATER		WEIGHT (kg)	CODE NO.
				1 m/min	2 m/min		
VWP-0810	UNDER WATER	1/8 HP	100	27ℓ-28ℓ	25ℓ-26ℓ	5.5	1026-001
VWP-0813			130			5.6	1026-002
VWP-0815			150			5.9	1026-003
VWP-0818			180			6	1026-004

1/4 HP. Under Water Coolant Pump



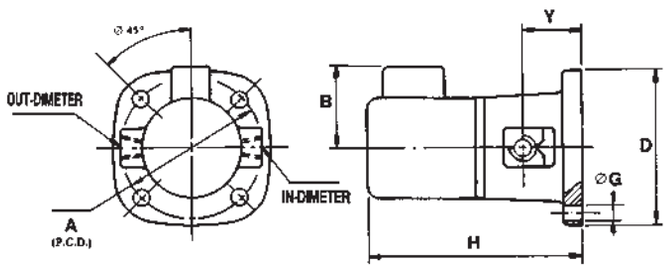
Unit:mm

POWER	A	B	C	D	G	H	Y	OUT-DIMETER
1/4 HP	158±0.2	125	Ø122	Ø180	Ø8	180	26	PT 1/2

Unitl:mm

ORDER NO.	TYPE	POWER	L m/m	PUMPING WATER		WEIGHT (kg)	CODE NO.
				1 m/min	2 m/min		
VWP-0415	UNDER WATER	1/4 HP	160	74ℓ-76ℓ	71ℓ-72ℓ	11.1	1026-010
VWP-0418			180			11.3	1026-011
VWP-0420			200			11	1026-012
VWP-0424			240			12.5	1026-013
VWP-0427			270			13	1026-014

Self Priming Coolant Pump 1/8 HP. 1/4 HP



Unit:mm

POWER	A	B	D	G	H	Y	IN-DIMETER	OUT-DIMETER
1/8 HP	140±0.2	105	165	Ø8	195	50±0.5	PT 3/8	PT 3/8
1/4 HP	185±0.2	125	225	Ø8	240	65±0.5	PT 1/2	PT 1/2

Unitl:mm

ORDER NO.	TYPE	POWER	PUMPING WATER		WEIGHT (kg)	CODE NO.
			1 m/min	2 m/min		
VWP-089	SELF PRIMING	1/8 HP	26ℓ-27ℓ	24ℓ-25ℓ	5.9	1026-020
VWP-049		1/4 HP	73ℓ-75ℓ	70ℓ-71ℓ	11.6	1026-021

Coolant Pump Kits

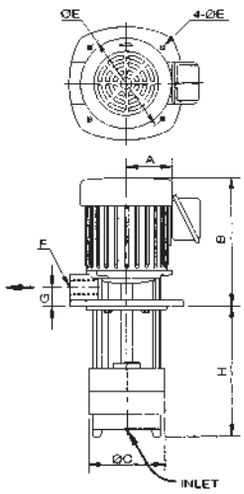
1/8 HP & 1/4 HP

ITEM \ ORDER NO.	VWP-81-150K	VWP-41-180K
Coolant pump (HPxH)	1/8 HP x 150mm	1/4 HP x 180mm
Tank size (LxWxH)	350x250x185mm	500x350x200mm
Volume of coolant tank	16ℓ	35ℓ
Connecting cable	2000mm	2000mm
Coolant hose kits w/magnetic base (ØxL)	1/4" x 330mm	3/8" x 360mm
Flexible conveying hose (ØxL)	3/8" x 1500mm	3/8" x 1500mm
Drain hose (ØxL)	1" x 300mm	1-1/4" x 400mm
Weight(kgs)	10.8	33
CODE NO.	1026-030	1026-031

SET INCLUDING

- Coolant pump
- Coolant tank
- Connecting cable (w/plug for 1 ph)
- Coolant hose kit w/magnetic base
- Flexible conveying hose
- Drain hose
- Tool kits
- ON/OFF switch (for 1ph)

Under Water Type Multi-stage High Pressure Coolant Pump



Special Features

- Discharge available in either N.P.T / P.T.
- Heavy duty bearings greased for long life and easy maintenance.
- Multi-stages., up to 6 stages for pressure over 9kg/cm² staggered discharge ports equalize radial loads for increasing pump life.
- Stainless steel made enclosed impeller., increasing pump efficiency and flow volumn.
- Rigid and strong one-piece shaft.

SPECIFICATION

ORDER NO.	STAGE	HP	A	B	C	D	E	F	G	H	PRESSURE kg/cm² (PSI)	VOLUMETRIC DELIVERY (ℓ/min)		DELIVERY HEAD (m)	WEIGHT (kg)	CODE NO.
												EMULSION	COOLING OIL			
VWP-MS2-180	2	3/4	135	255	135	9	170	3/4" or 1" (option)	28	180	3 (42)	140	116	30	15	1026-040
VWP-MS2-250										250					15.5	1026-041
VWP-MS3-200	3	1	135	275	135	9	170	3/4" or 1" (option)	28	200	4.5 (64)	140	116	45	16	1026-042
VWP-MS3-250										250					17	1026-043
VWP-MS4-230	4	1 1/4	135	275	135	9	170	3/4" or 1" (option)	28	230	6 (85)	140	116	60	18	1026-044
VWP-MS4-180										180					19	1026-045
VWP-MS5-210	5	1 1/2	135	275	135	9	170	3/4" or 1" (option)	28	210	7.5 (106)	140	116	75	20	1026-046

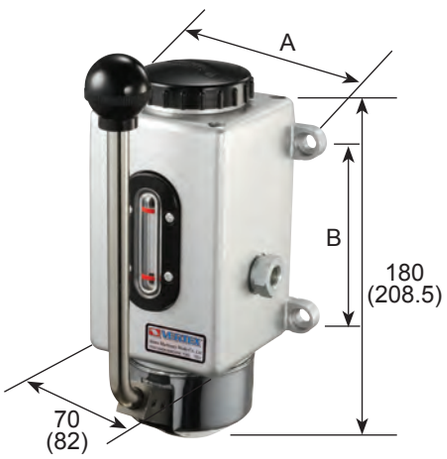
Hand Lubrication Pumps

LT-4

Rattling hand pump LT model

Rattle the lever of the pump reiteratively and the oil will be pressured into the main pipe. When the lever is released, it will return to the original position automatically.

ORDER NO.	Discharged amount (c.c/st)	Max. discharged pressure (kg/cm²)	capacity (c.c)	Efficient capacity (c.c)	WEIGHT (kg)	CODE NO.
LT-4	4	15	230	200	0.7	1026-050



LT-6

Rattling hand pump LT model

The discharged amount and pressure are higher than those of LT-4 and the operation method is just the same.

ORDER NO.	LT-6	LT-18	LT-18A
Size (AxB)	85x85	100x110	98x107
Weight	1.2kg	1.6kg	1.6kg

ORDER NO.	Discharged amount (c.c/st)	Max. discharged pressure (kg/cm²)	capacity (c.c)	Efficient capacity (c.c)	CODE NO.
LT-6	6	15	350	250	1026-061
LT-18	8	15	600	400	1026-062
LT-18A	8	15	650	450	1026-063

EA-8L

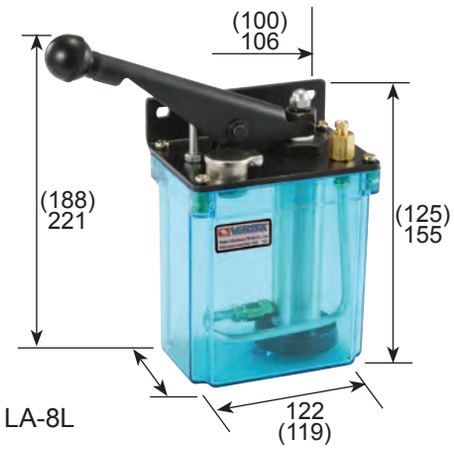
Pulling type hand pump EA model

Pull the lever of the pump reiteratively and the oil will be discharged at the up or down port.

ORDER NO.	Discharged amount (c.c/st)	Max. discharged pressure (kg/cm²)	capacity (c.c)	Efficient capacity (c.c)	WEIGHT (kg)	CODE NO.
EA-8 R	8	3.5	600	500	1	1026-070
EA-8 L						1026-071

The installation machine could be selected either the right side marked “R” or the left side marked “L”

Hand Lubrication Pumps



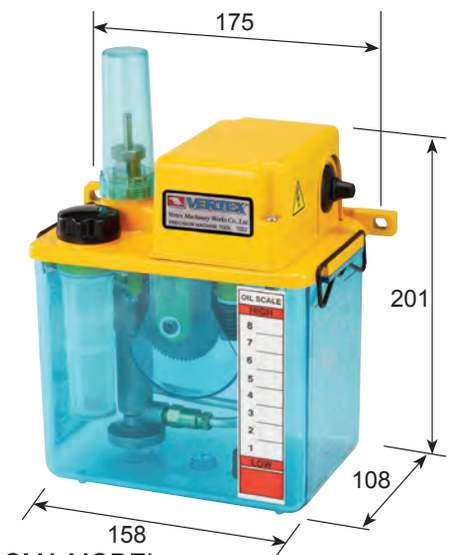
LA-8L

Depressing type hand-pump model LA

Depress the lever repeatly, first. The oil Will be pressured out when it's depressed. Only after the lever is released, the pressured oil will be discharged.

ORDER NO.	Discharged amount (c.c/st)	Max. discharged pressure (kg/cm²)	capacity (c.c)	Efficient capacity (c.c)	WEIGHT (kg)	CODE NO.
LA-8 R	1~8	5	1000	800	1.4	1026-082
LA-8 L						1026-083

The installation position of a machine could be selected either the right side marked "R" or the left side marked "L"

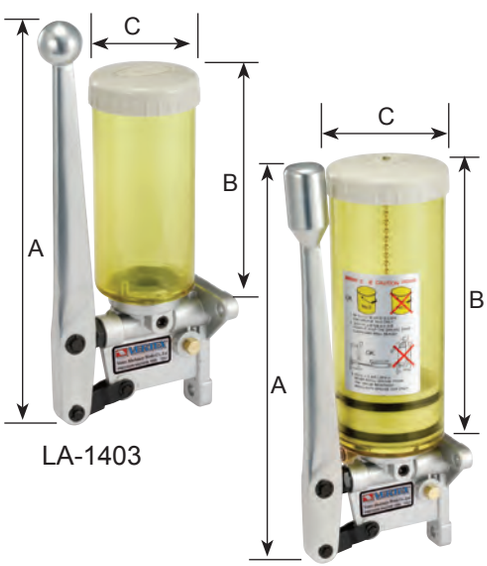


SMA MODEL
(AUTOMATIC)

Electrical automatic pump SMA model

The out standing performances of SMA models belong to intermittent oil supply pumps whose specification are classed into four kinds by the intermittent time and the discharged amount is adjustable within the range of 1~3c.c.

ORDER NO.	Intermittent time (min)	Discharged amount (c.c/st)	Max. discharged pressure (kg/cm²)	Capacity (ℓ)	WEIGHT (kg)	CODE NO.
SMA-3	5, 10, 15, 30, 60	1~3	3	2	1.8	1026-090
SMA-6		3~	3	2	1.8	1026-091
SMA-8.5		4~8.5	3	2	1.9	1026-092
Motor's voltage is AC 110V or 220V						



LA-1403

LA-2403

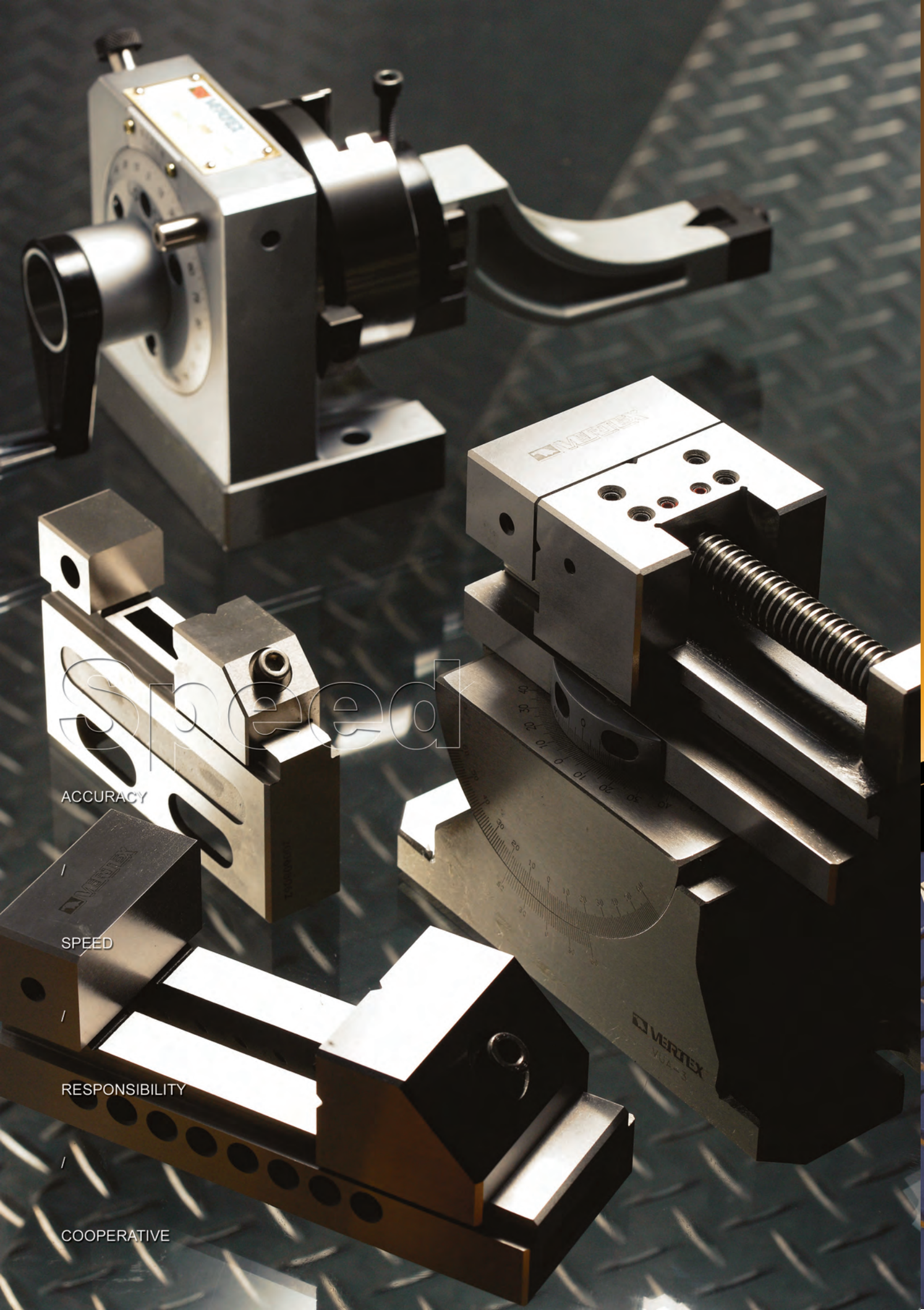
Operation Instructions:

When move the operating rod, the plunger (iron core) will be moved simultaneously so as to make cylinder become under negative pressure. Then, due to closed air pressure of the tank, the grease will get into the cylinder from the suction port. Now, operate the rod to extrude out the grease through pipe in the cylinder by principle of the plunger pushing open the check valve. When inside pressure reaches to the specific pressure of 100kg/cm², down pressure valve will start to return the grease to the oil tank. The operating rod is to use of a spring to link on the injector, while the oil tank is tightly fixed on the injeector as a round storage tank to prevent from oil leaking.

Advantages:

- Has smooth stickness to the lubricating surface with proper oiling capacity, so no surplus oil will be leaked out to stain with the surface of bench.
- No need to worry about the dirts & impurities entered into the oiling port, so it is more clean than other ways of lubrication.
- Manual type pump. Use of single pipe, so no need of pipe return device. With simple piping for best effect.

ORDER NO.	A	B	C	OIL	c.c./stork	VOLUME c.c.	PRESSURE kg/cm²	VALVE	SPRAY MOUTH	CODE NO.
LA-1403	290	150	70	MACHINE OIL	2	300	60	SD	60 ☐	1026-100
LA-1408	310	205	90			800				1026-101
LA-2403	290	150	70	GREASE	2	300	100	SD	60 ☐	1026-102
LA-2408	310	205	90			800				1026-103


Speed
ACCURACY
/
SPEED
/
RESPONSIBILITY
/
COOPERATIVE

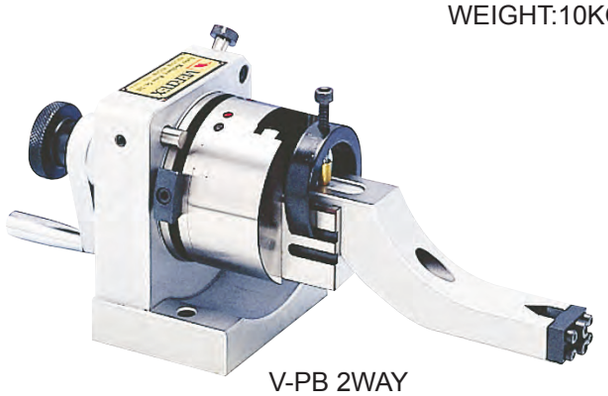
B1~B3	PUNCH FORMER / GRINDER
B4~B7	TOOL MAKER VISE / SINE VISE ANGLE PLATE / ANGLE CHUCK
B8~B12	SINE BAR / ANGLE PLATE V-BLOCK WITH CLAMP / ANGLE BLOCK
B13~B16	ELECTRODE HOLDER / EDW SERIES TOOL MAKER VISE
B17~B18	WIRE DIES GUIDE / ELECTRODE EDM FILTER
B19~B23	GRINDER WHEEL DRESSER SERIES
B23~B24	WHEEL HANGER / WHEEL BALANCING STAND
B25~B30	SINE PLATE / MAGNETIC PLATE
B31~B32	PERMANENT-ELECTRO MAGNETIC CHUCK
B33~B34	LIFTER SERIES
B35	STANDARD POLE ELECTRO MAGNETIC CHUCK
B36	CHUCK CONTROLLER
B37	MAGNETIC LIFTER
B38	MAGNETIC TRANSISTING BLOCK MAGNETIC ADJUSTABLE LINK
B39	MAGNETIC STEEL SHEET SEPARATOR MAGNETIC CHIP COLLCETER MAGNETIC SEPARATING BAR UNIT
B40~B41	DEMAGNETIZER SERIES
B42	CHIP COLLECTER SERIES
B43~B47	MAGNETIC V-BLOCK / MAGNETIC TOOLS MIST COOLANT SYSTEM
B48	HOSE KITS
B49~B50	PAPER FILTER / MAGNETIC SEPARATOR
B51~B52	COOLANT TANK / OIL SKIMMER
B53~B55	GAUGE BLOCK / SURFACE PLATE
B56~B57	CLEANING PAPER GRANITE SQUARE RULERS GRANITE SURFACE STAND CYLINDRICAL SQUARES STEEL HORIZONTAL LEVELING INSTRUMENT GRANITE TRIANGLE RULER
B58	CONCENTRIC TEST STAND FIXED SPEED PUNCH FORMER PIN GAUGE
B59~B61	MEASURING TOOL / ANGLE LEVEL

GRINDING MACHINE ACCESSORIES

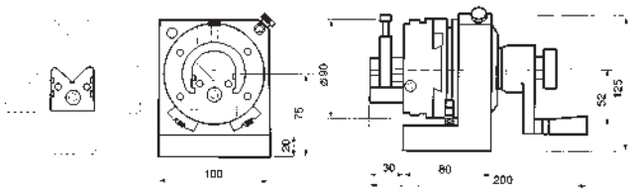
Punch Former

ORDER NO.V-PB CODE NO.2001-001

WEIGHT:10KGS



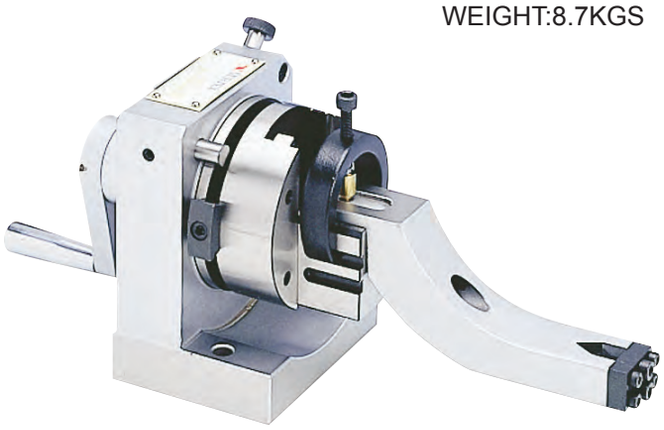
V-PB 2WAY
V-PS 1WAY, THROUGH HOLE



- Punch former is the fixture to grind the point of standard punches and E.D.M. electrodes for precise and fast operation.
- Besides the round, radius and multiangle punches, any special forms can be ground precisely .
- By using this attachment, it can be ground either concave or convex radius shape.
- The capacity is from 4mm to 30mm.
  Punch Former is the great dressing instrument. Precision.forming of grinding wheel can be done by assembling an ARM with the main body. Any combination of tangents or radial form of the grinding wheel may be dressed accurately by easy operation.
- Max. diameter of grinding wheel within 200m/m can be dressed accurately and safely. The height from base to roller`s center is 80m/m. Movement of each side can reach 12.5m/m while aiming at the center of V block. The main body is made of one piece steel construction.

ORDER NO.V-PS CODE NO.2001-101

WEIGHT:8.7KGS



V-PS can pass through from itself to the center of grip, in case of facing a more longer punch ejector pin, it can go deep into of the grip position directly. To assemble an ARM with the main body, any combination of radial form of the grinding wheel may be dressed accurately by easy operation.

Specification

D(diameter)of the pressed part of the punch...4-30mm
L(length)of the pressed part of the punch...above22mm
Upper and lower movement span of V block.....25mm
Horizontal movement span of V block(one side)..12.5mm
(tow side)...25mm
Length of V block 30mm
Height of the rotary central axis.....15mm
Cutting and dividing.....24 equal pieces(15″)
Sand forming of the forming lever
(concave R).....100mmR
(convex R).....48mmR
Diamond sharpening knife
(small diameter)60x50(1/10carat)
(large diameter)100x50(1/4carat)

*Except for the handle and graduation scale all metal is special hard tool steel (SKS-2) heat treated at HRC 63

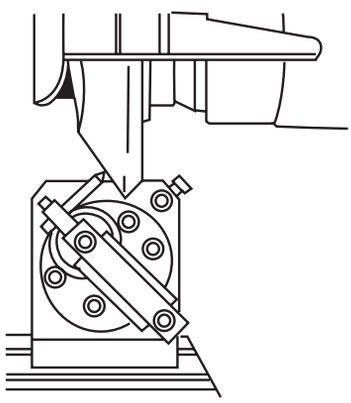
*V block can be disassembled for use separately.
V-PS the center through hole is ø30m/m

SPECIAL PART ACCESSOR FOR ANGULAR DRESSING

ORDER NO.V-PF CODE NO.2001-020

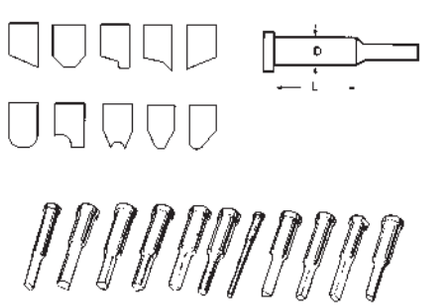
WEIGHT:0.7KG

Without Diamond



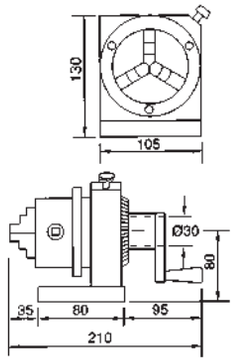
The Wheel angular dressing

Appliycation style:



3-Jaws Punch Former

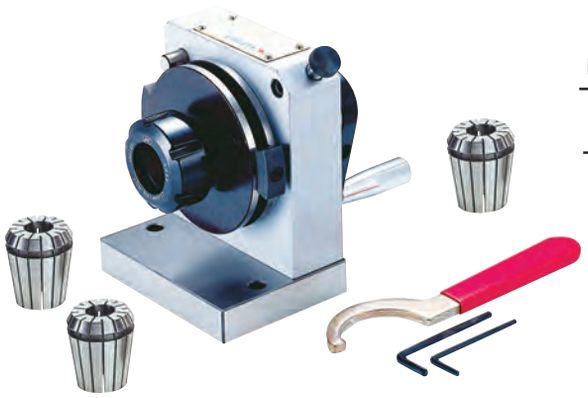
ORDER NO.V-PS-80J CODE NO:2001-030

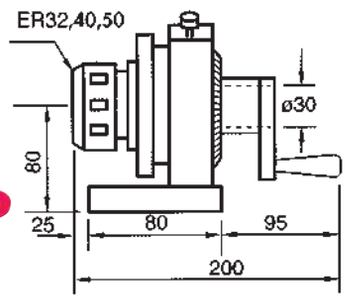


- The center of 3 jaws punch grinder can move gently to fix and to help the concentricity more precision.
- This punch grinder can divide into 24 angles, each angle is 15 degrees at 10 seconds accuracy, the weight is8.7kgs.
- This style base can be selected to set up with sine plate to make sine angles. The sine plate also can be used with other Machines.
- The base can be adjusted for sine angle. (ORDER NO.V-PS-80JS)

ER Collet Dividing Punch Former

ORDER NO.V-PS-ER32 CODE NO.2001-040
ORDER NO.V-PS-ER40 CODE NO.2001-041
ORDER NO.V-PS-ER50 CODE NO.2001-042

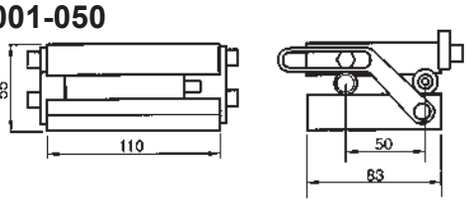




- ER Collet Dividing Punch Grinder put ER32 main body and with collet inner size 6, 8, 10, 12, 16, 20mm,total 6pcs.the weight is 11kgs. ER40 with 7pcs, ER50 with 6pcs collet. (ER50 collet size 12, 16, 20, 26, 30, 32mm)
- The center of collet can move gently to help the concentricity more precision.
- This punch grinder can divide into 24º angles,each angle is 15 degrees at ±10 seconds accuracy.
- ER16 connection, special accessory(v-601 20-ER16-50L WITH 10PCS COLLET) can use
  ER 16 base can select sine vise base which is good for sine angle use
  (ORDER NO.V-PS-ER32S) .

Sine Plate For All Type Punch Former

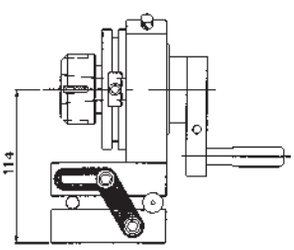
ORDER NO.V-PS-SP WEIGHT:3.6kgs
CODE NO.2001-050



IT´S FIT WITH VERTEX´S V-PB
V-PS. V-PS-ER-32. V-PS-80J

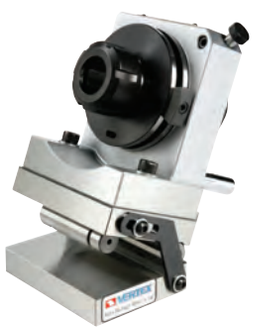
ER Collet Dividing Punch Grinder With Sine Plate

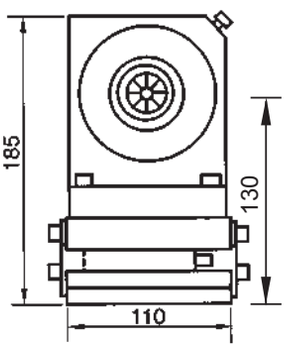
ORDER NO.V-PS-ER50S WEIGHT:10kgs
CODE NO.2001-061



ER Collet Dividing Punch Grinder With Sine Plate

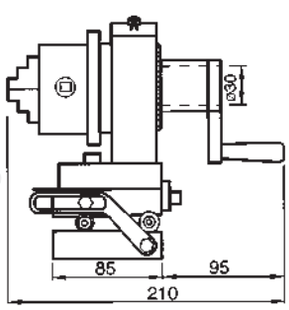
ORDER NO.V-PS-ER32S WEIGHT:11kgs
CODE NO.2001-060





3-Jaws Punch Former With Sine Plate

ORDER NO.V-PS-80JS WEIGHT:11.7kgs
CODE NO.2001-070

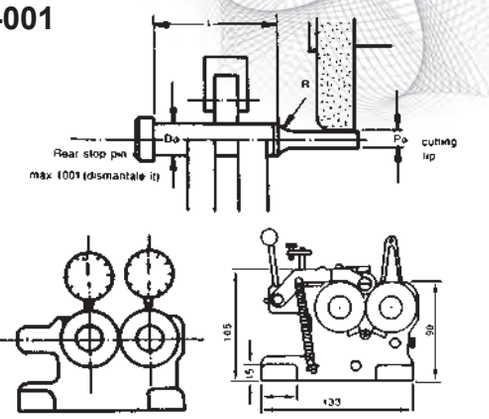


Punch Grinder

ORDER NO.V-PGS CODE NO.2002-001
MINI-TYPE
PUNCH GRINDER Ø1.5-3mm

This is a mini type punch grinder which can grind fine punch of outside diameter from 1.5mm to 3mm.N.W.4.5kgs

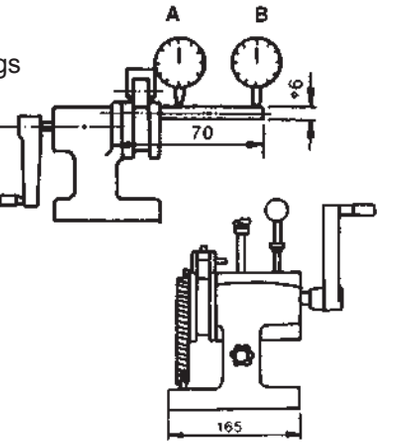
Accuracy of point A within 0.005m/m and point B Within 0.008m/m while turning.



ORDER NO.V-PG CODE NO.2002-010
STANDARD- TYPE Ø1.5-Ø25 WEIGHT: 6.6kgs

Punch grinder is a tool which can be put on the surface grinding machine for round punches(1.5mm-25mm).It can be ground by putting among three rollers of punch grinder. without checking the center.
Accuracy of roller within 0.005mm while turning right or left. It can allow lenght 5-35m/m

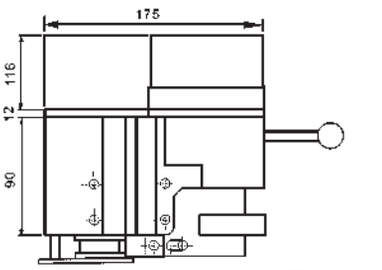
Accuracy of point A within 0.005m/m and point B Within 0.008m/m while turning.



ORDER NO.V-PGM CODE NO.2002-020
WITH MOTOR TYPE Ø1.5-Ø25
WEIGHT: 11.8kgs

Features

1. High accuracy cylindrical grinding work possible just by putting this economical unit on surface grinder.
2. No center alignment necessary.just put work on rollers.
3. Portable with single hand, thus easily set on grinding.
4. With rollers motor -driven attention can be concentrated on table/wheel feeds.
5. Work can be formed in radius taper as well
6. Double roller unit available for long pin or punch grinding.



V- PGM

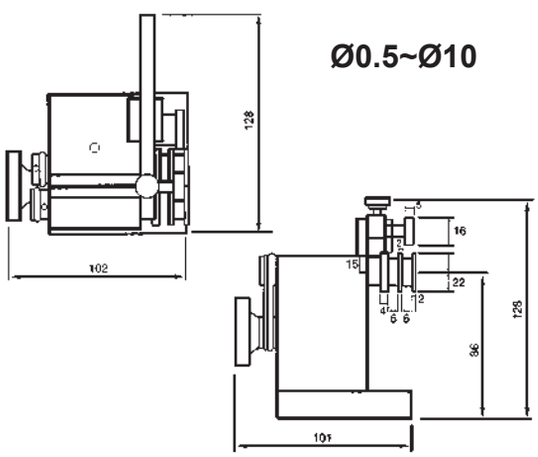
FEATURES
Mounting surface(RLxFB).....175X218X90mm
50Hz/220v.....108rpm
Roller speed 60Hz/110v.....129rpm
Accuracy(Roundness and concentricity).....25.4mm
Roller driving motor 110v, Single phase, 25W
(Specifications are subject to change without notice.)

Punch Grinder

ORDER NO:V-PGA CODE NO.2002-030
WEIGHT:3.1kgs

1. The small punch grinder can process from dia 0.5mm to 6mm. If the length of workpiece is about 10mm which can be grind.
   This punch grinder can work with surface grinding machine and to grinding any sizes.
2. Easy operation and high precision make it to be the best grindig tool for small workpiece.

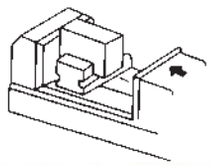
Ø0.5~Ø10

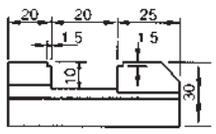


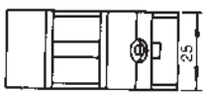
Mine Tool Maker Vise

ORDER NO.VMV-10 CODE NO.2003-001

WEIGHT:0.3kg

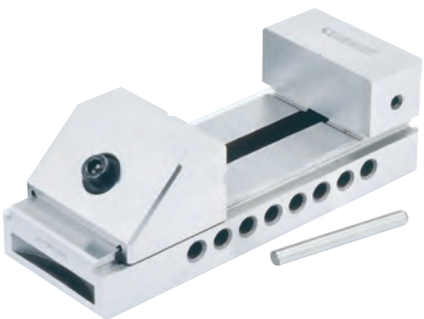


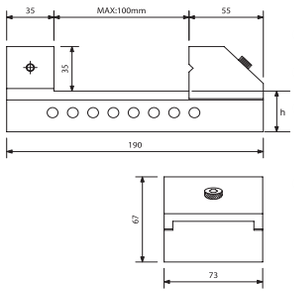




Tool makers vise of mini type which can be put in a bigger vise to process the small and precise workpiece.Also it can be used in an E.D.M. machine and grinding machine. Squareness and parallelism: within 0.003mm.

Tool Maker Vise



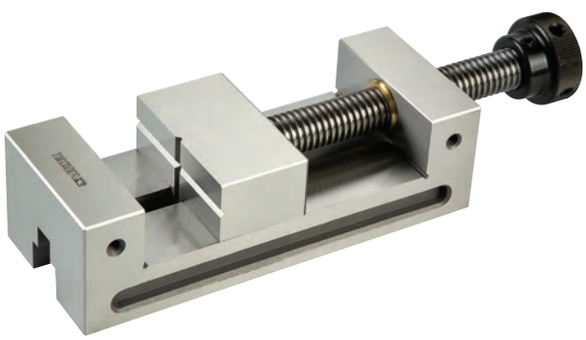


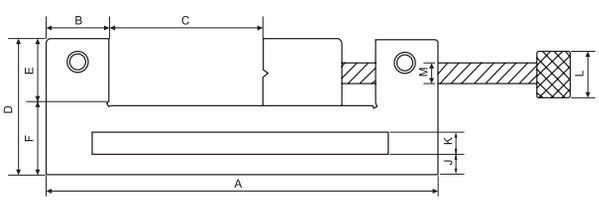
- Made of SK material of J.I.S. specification.
- Hardened by heat treatment and precision ground.
- Squareness and parallelism are ensured to be within ±0.005mm.
- It can be used and kept its high precision while standing on its base, sides or extremity, for inspection use in stead of squares due to its extremely accuracy.

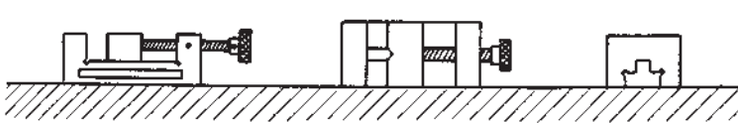
Unit:mm

ORDER NO.	MATERIAL	LENGTH	WIDTH	JAW OPENING	JAW HEIGHT	HEIGHT (mm)	h	HARDEN	N.W (KGS)	CODE NO
VMV-15	SK2	100	36	40	20	45	25	HRC54˚±2˚	0.9	2003-010
VMV-20	SK2	150	48	75	29.5	57	28	HRC54˚±2˚	2	2003-011
VMV-25	SK2	170	63	90	35	62	28	HRC54˚±2˚	3.3	2003-012
VMV-30	SK2	190	73	100	35	67	32	HRC54˚±2˚	4.5	2003-013
VMV-35	SK2	225	88	125	45	84.5	40	HRC54˚±2˚	7	2003-014
VMV-40	SK2	230	98	125	45	85	40	HRC54˚±2˚	8.9	2003-015
VMV-50	SK2	287	125	150	50	100	50	HRC54˚±2˚	15.5	2003-016
VMV-60	S50C	330	150	200	50	100.5	50	HRC54˚±2˚	21.4	2003-017

Tool Maker Vise





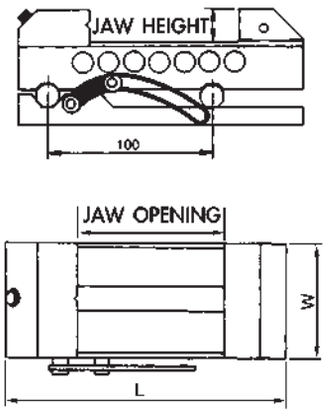


TOLERANCE	±0.004mm, ±0.005mm

Unit:mm

ORDER NO.	MATERIAL	A LENGTH	JAW B HEIGHT	JAW C OPENING	D WIDTH	E	F	G	H	I	J	K	L	M	N	O	HEIGHT (mm)	HARDEN	WEIGHT (KGS)	CODE NO.
VDV-20	SK2	155	25	60	54	29	25	48	45	25	9.50	10.15	34.70	15.80	48	11.60	54	HRC54˚±2˚	2.5	2003-020
VDV-25	SK2	176	25	75	60	30	30	63	44.80	25	10	10.90	39.60	15.75	63.10	28.15	60	HRC54˚±2˚	3.9	2003-021
VDV-30	SK2	181	30	74	70	40	30	73	51.85	25	14	12.35	50.35	18.95	73	26	70	HRC54˚±2˚	5.7	2003-022
VDV-35	SK2	250	35	125	73	35	38	88	55.40	35.55	10.80	11.60	54.85	25.35	88.45	30.20	73	HRC54˚±2˚	9.2	2003-023
VDV-40	SK2	250	35	125	73	35	38	98	55	34.75	11.80	11.55	54.65	25.35	98.60	29.60	73	HRC54˚±2˚	10.1	2003-024

Sine Vise



- Compound angles easily and quickly set.
- Adjustments up to 46 degrees.

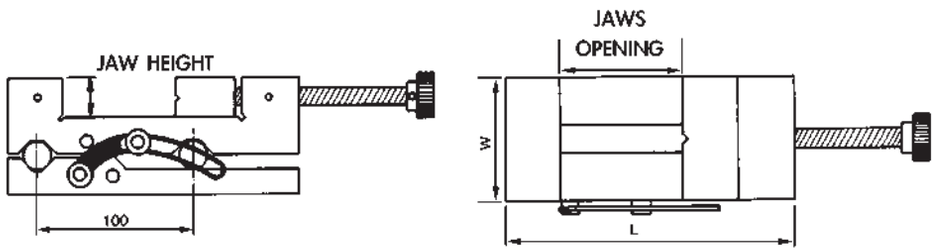
Accuracy
Material Hardened:SKS HRC60ºSub-zero processing.
Parallelism: Within 0.003/100mm
Squareness: Within 0.005/100mm
Model:V.VC.L CSV
Angle tol: Within 15sec Within 20sec
*Since conversion table attached

SPECIFICATION

Unit:mm

ORDER NO.	MATERIAL	LENGTH	WIDTH	JAW OPENING	JAW HEIGHT	HEIGHT (mm)	ANGLE	HARDEN	N.W (KGS)	CODE. NO.
SVB-20	SK2	155	48	80	30	93.5	0˚-46˚	HRC56˚-58˚	4.4	2003-030
SVB-25	SK2	175	63	90	35	102.5	0˚-46˚	HRC56˚-58˚	6	2003-031
SVB-30	SK2	180	73	90	35	103.8	0˚-46˚	HRC56˚-58˚	6.9	2003-032

Sine Vise



SPECIFICATION

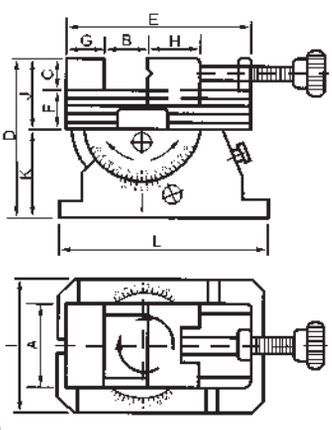
Unit:mm

ORDER NO.	MATERIAL	LENGTH	WIDTH	JAW OPENING	JAW HEIGHT	HEIGHT (mm)	ANGLE	HARDEN	N.W (KGS)	CODE. NO.
SVD-200	SK2	155	48	60	25	94	0˚-46˚	HRC54˚±2	4.6	2003-040
SVD-250	SK2	176	63	68	30	97.5	0˚-46˚	HRC54˚±2	6.4	2003-041
SVD-300	SK2	180	73	72	30	103	0˚-46˚	HRC54˚±2	8.4	2003-042

Precision Universal Angle Vise

VUA-3

VUA-4

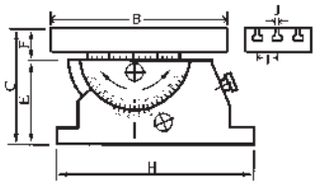


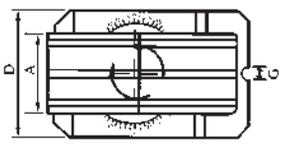
- Precision graduction for accurate reading.
- Its swivelling and tilting features make this unit well suited for straight or inclined surface, angular driling machining on various machine tools as precision grinding machine, boring and milling machine, electrical discharge machine etc.
- Tolerence ±0.01mm/100mm.
- Vise bottom to base parallelism ±0.02mm
- Squareness ±0.02
- 360º Horizontal swivel
- 45º Vertical tilting
- Precision ground
- Material: SK-2
- Hardness: HRC52º±2º

ORDER NO.	A	B	C	D	E	F	G	H	I	J	K	L	N.W(KGS)	CODE.NO.
VUA-3	70	85	30	146	162	32	32	45	110	63	83	182	14.6	2003-050
VUA-4	88	108	35	166	200	32	36	56	110	67	99	182	17.8	2003-051

Precision Universal Angle Plate

- Precision grounded.
- Rigid design.
- The table can swivel 360°,and tilts 45°
- It can put tool maker vise VMV-type VDV-type or 3 jaw chuck for clamping
- The graduction for accurate reading



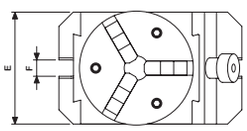


ORDER NO.	A	B	C	D	E	F	G	H	I	J	G.W (kgs)	CODE NO.
VUA-408	100	200	125	110	82	50	16	182	30	12	15	2003-055
VUA-510	126	250	125	110	82	50	16	182	40	12	18.1	2003-056

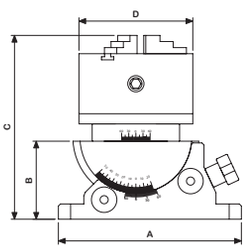
Precision Universal Angle Chuck

NEW

With VSC-4 Chuck

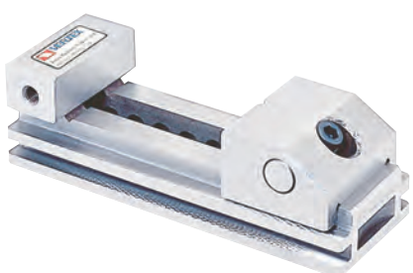


- Precision graduction for accurate reading.
- Its swivelling and tilting features make this unit well suited for straight or inclined surface, angular driling machining on various machine tools.
- With VSC-4 3-Jaw chuck.
- O.D. clamping Ø3-90 mm,
- I.D. clamping Ø32-84 mm.
- Tolerence ±0.01mm/100mm.
- 2 axis with angle scale
- For angle setting
- Chuck indexing / Rotating setting
- Tilting Features same as VUA series, Page B5.

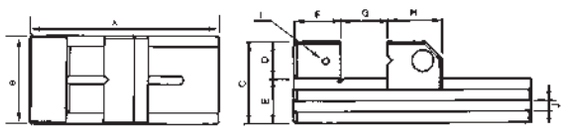


ORDER NO.	A	B	C	D	E	F	G.W (kgs)	CODE NO.
VUA-100J	180	77	181	112	110	16	14	2003-060

Tool Makers Vise

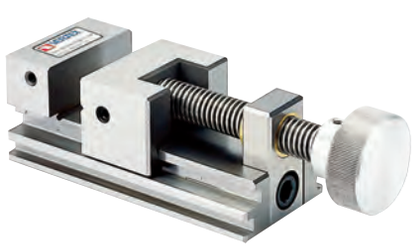


- Material:SKS2
- Hardness:HRC 58˚-60˚
- Squareness:Within 0.005m/m

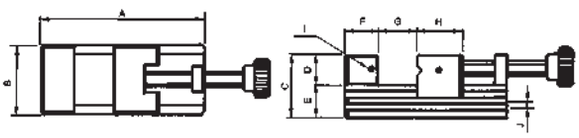


ORDER NO.	A	B	C	D	E	F	G	H	I	J	N.W (kgs)	CODE NO.
VC20	135	48	42	20	22	23	62	40	M6	5x7	1.3	2003-070
VC25	160	70	62	30	32	33	80	45	M6	8x7	3.6	2003-071
VC30	175	73	65	32	33	35	95	45	M6	8X7	4	2003-072

Tool Makers Vise



- Material:SKS2
- Hardness:HRC 58˚-60˚
- Squareness:Within 0.005m/m

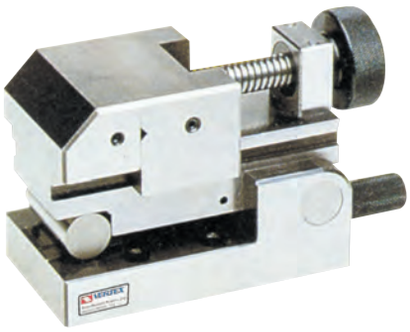


ORDER NO.	A	B	C	D	E	F	G	H	I	J	N.W (kgs)	CODE NO.
V-VE20	90	60	50	25	25	25	32	32	M5	6x6	2	2003-080
V-VE25	160	70	62	30	32	33	80	45	M6	8x7	4.7	2003-081
V-VE30	175	73	65	32	33	35	95	45	M6	8X7	5.4	2003-082

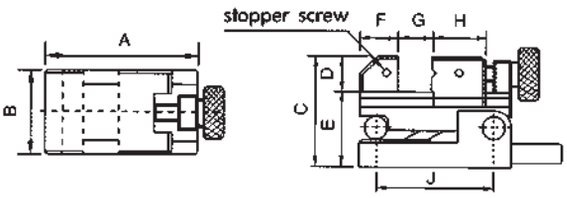
Precision Sine Vise

ORDER NO.SVC-100 CODE NO.2003-090

THE CLAMP HANDLE IS PLACED UNDER WORK PIECE.



HARDENESS HRC 60˚, SKS3
PARALLELISM 0.003/100mm
SQUARENESS 0.005/100mm



Unit:mm

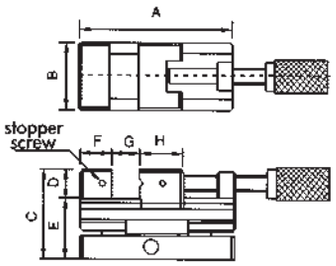
A	130
B	70
C	93
D	30
E	63
F	33
G	45
H	45
I	M5
J	100
Max.angle	46˚
Weight(kgs)	5.5

Precision Sine Vise

ORDER NO.SVL-50 CODE NO.2003-100

HORIZONTAL WAY

HARDENESS HRC 60˚, SKS3
PARALLELISM 0.003/100mm
SQUARENESS 0.005/100mm



Unit:mm

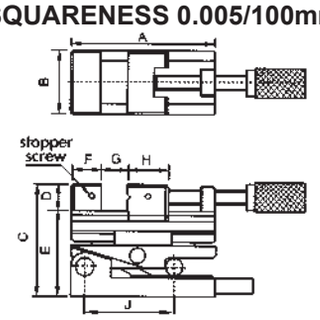
A	160
B	73
C	93
D	30
E	63
F	33
G	80
H	45
I	M5
Max.angle	46˚
Weight(kgs)	6.6

Two Way Vise

ORDER NO.SVS-100 CODE NO.2003-110

2 WAYS

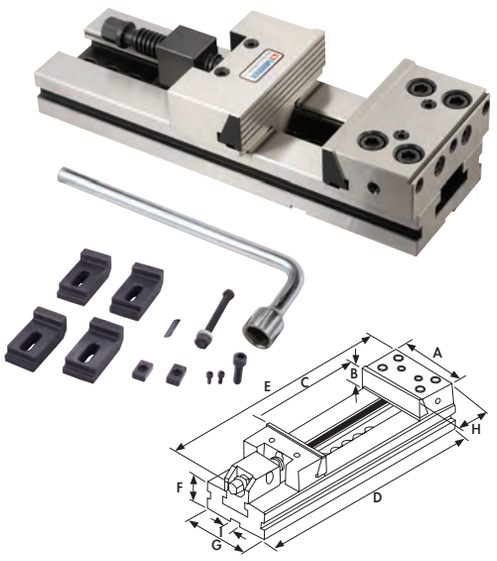
HARDENESS HRC 60˚, SKS3
PARALLELISM 0.003/100mm
SQUARENESS 0.005/100mm



Unit:mm

A	160
B	73
C	124
D	30
E	94
F	33
G	80
H	45
I	M5
J	100
Max.angle	46˚
Weight(kgs)	8.3

Modular Precision Machine Vise

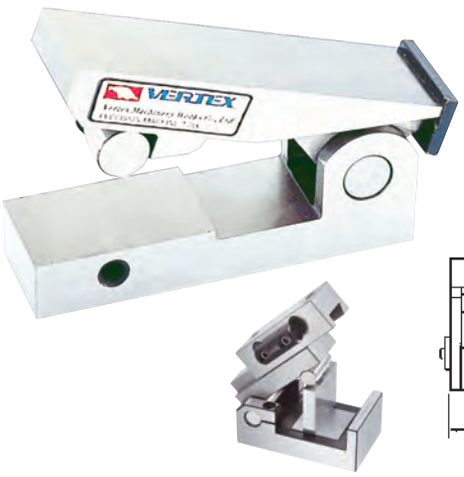


FEATURES

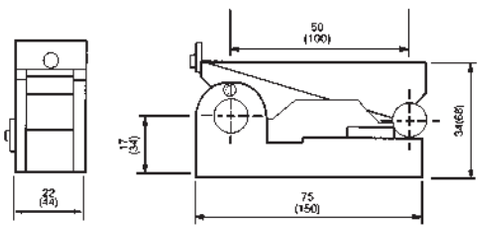
- High Accuracy
- Unlimited Clamping Range
- High Quality Alloy Steel
- High Clamping Pressure
- EACH ONE IS SAME AS HEIGHT.
- CAN BE USED IN MULTIPLE STYLE
- No'Length of Height Limitation
- NO jaw Life
- Low Profile
- All Vises are Matched
- Swivel base be optional

ORDER NO.	VMP-4	VMP-5	VMP-6	VMP-6B	VMP-6C	VMP-7A	VMP-7B	VMP-7C	VMP-8A	VMP-8B	VMP-8C	VMP-8D	VMP-12C	VMP-12E
A	100	125	150	150	150	175	175	175	200	200	200	200	300	300
B	30	40	50	50	50	60	60	60	65	65	65	65	80	80
C	100	150	200	300	400	200	300	400	200	300	400	500	400	600
D	270	345	420	520	620	455	555	655	573	595	695	795	735	935
E	325	146	530	600	700	620	620	620	718	718	718	880	830	1030
F	35	40	50	50	50	58	58	58	70	70	70	70	78	78
G	75	96	125	125	125	145	145	145	170	170	170	170	195	195
H	78	78	90	89.4	89.4	97	97	97	114	114	114	113.4	120.4	120.4
I	16	16	16	16	16	16	16	16	16	16	16	16	16	16
KGS	9.2	16	28.5	34.8	38.1	43.7	48.3	53.5	66.3	73.2	81.3	87.2	125	143
CODE NO	1002 -190	1002- 191	1002 -192	1002 -201	1002 -202	1002 -193	1002 -194	1002 -195	1002 -196	1002 -197	1002 -198	1002 -203	1002 -204	1002 -205

Sine Bar With Magnetic



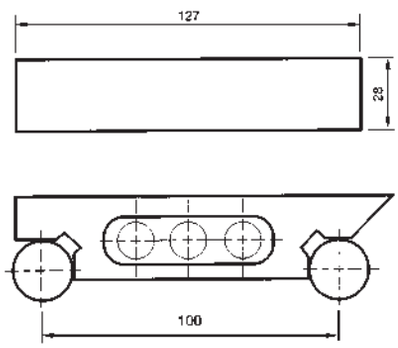
There is magnet in the bottom which can be run on any kind of machine for testing angle use.



Unit:mm

ORDER NO.	SQUARNESS	ACCURACY	PARALLELISM	HARDENESS	MATERIAL	N.W. (kgs)	CODE NO.
V-S50M	0.005mm	±0.002	0.002mm	HRC60°	YK-30	0.4	2004-001
V-S100M	0.005mm	±0.002	0.002mm	HRC60°	YK-30	2.3	2004-002

Sine Bar

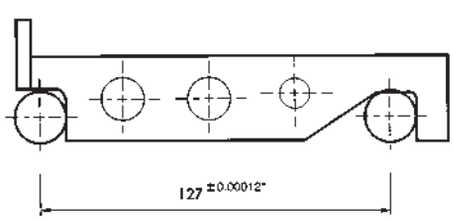


Unit:mm

ORDER NO.	LENGTH	WIDTH	HEIGHT	CENTER DISTANCE	PARALLEL	HARDEN	BLOCKS DIA.	MATERIAL	N.W (kgs)	CODE NO.
VS-100	127	28	35	0.005	0.005	HRC50°	20Øm/m	SK3	0.8	2004-010

Sine Bar-Inch

Change of the sine angle must be count on sine bar inspection, the bar's tolerance within 0.005mm



Unit:inch

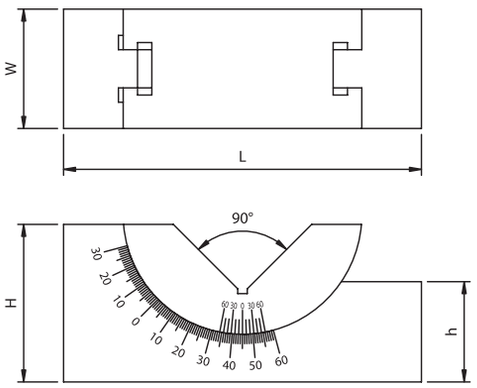
ORDER NO.	LENGTH	WIDTH	HEIGHT	CENTER DISTANCE	PARALLEL	HARDEN	BLOCKS DIA.	MATERIAL	N.W (kgs)	CODE NO.
V-S25	6-3/8″	1″	1-1/4″	127	0.00012″	HRC52°	3/4″	SK2	1	2004-020
V-S50	6-3/8″	2″	1-1/4″	127	0.00012″	HRC52°	3/4″	SK2	1.8	2004-021

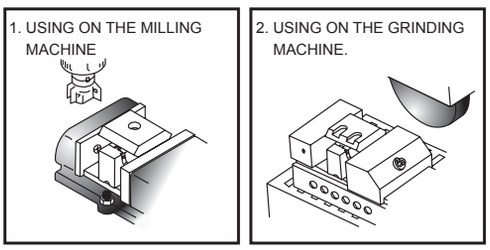
HOW TO CHOICE THE BLOCK FOR SINE BAR

DISTANCE / GAUGE BLOCK / CAN GET HEIGHT / DEGREE	SIN BAR CENTER 50	SIN BAR CENTER 100
2°	1.7405	3.4899
3°	2.6168	5.2336
4°	3.4878	6.9756
5°	4.3578	8.7155
6°	5.2264	10.4528
7°	6.0935	12.1869
8°	6.9587	13.9173
9°	7.8217	15.6434
10°	8.6824	17.3648
11°	9.5404	19.0809
12°	10.3956	20.7911
13°	11.2476	22.4951
14°	12.0961	24.1921
15°	12.9401	25.8819
16°	13.7819	27.5637
17°	14.6186	29.2371
18°	15.4058	30.9017
19°	16.2784	32.5586
20°	17.1010	34.2020
21°	17.9184	35.8367
22°	18.7303	37.4606
23°	19.5366	39.0713
24°	20.3368	40.6736
25°	21.1309	42.2618
26°	21.9186	43.8371
27°	22.6995	45.3990
28°	23.4736	46.9471
29°	24.2405	48.4809
30°	25.0000	50.0000
31°	25.7519	51.5038
32°	26.4960	52.9919
33°	27.2320	54.4639
34°	27.9596	55.9192
35°	28.6788	57.3576
36°	29.3893	58.7785
37°	30.0908	60.1815
38°	30.7831	61.5661
39°	31.4660	62.9320
40°	32.1394	64.2787
41°	32.8030	65.6059
42°	33.4565	66.9130
43°	34.0999	68.1998
44°	34.7329	69.4658
45°	35.3553	70.7106

Angle Plate

90º V-way. High carbon steel hardened to 50º-54º HRC, precision ground to within 0.005mm accuracy in squareness. Angle tolerance 30 seconds. Sets any angle 0-60º, vernier reading 10 minutes. 2 set screws provided for firmlocking at fixed angle.
Material: SK2
Hardness: HRC50º-54º
Squareness: ±0.01mm
Angular measures from 0º-60º

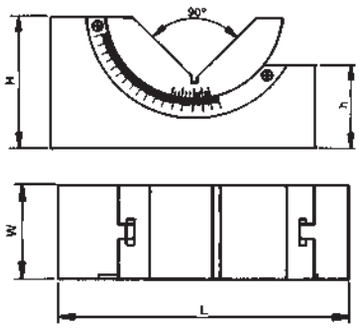




Unit:mm

ORDER NO.	H	W	L	h	N.W. (KGS)	CODE NO.
VAP-1	47	46	102	28	1.4	2005-001
VAP-2	47	30	102	28	0.9	2005-002
VAP-3	32.5	25	75	21	0.5	2005-003

Micro-Adjustable Angle Plate



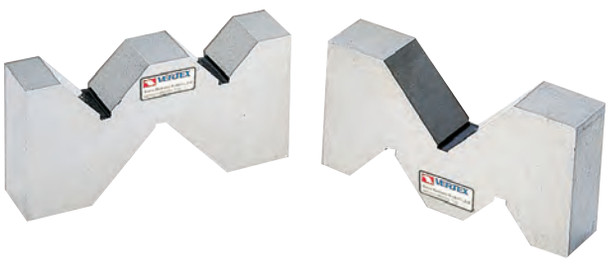
ANGULAR CAN BE ADJUSTED FROM 0º~60º BY SCREW

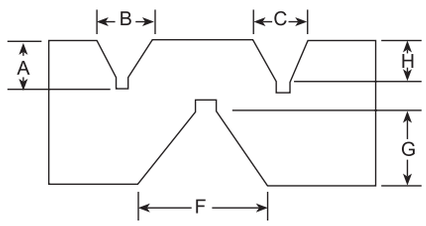
Unit:mm

ORDER NO.	H	W	L	h	N.W. (KGS)	CODE NO.
VAPM-1	47	46	102	28	1.4	2005-010
VAPM-2	47	30	102	28	1	2005-011
VAPM-3	32	25	75	22	0.5	2005-012

Precision V Block

PAIRS GROUNDED





Unit:mm

ORDER NO.	A	B	C	F	G	H	L X W X H	WEIGHT(KGS)	CODE NO.
V-3VA	9	23	19	44	21	7	76X23X43	0.9	2005-015
V-4VA	14	34	28	62	27	11	100X32X60	2.1	2005-016
V-5VA	14	35	40	63	29	19	124X35X61	2.8	2005-017

Precision Angle Blocks

ORDER NO.AB-130 CODE NO.2006-001

WEIGHT:1kg

Furnished in 1° increments to 5 degrees and in 5° increments to 30 degrees. With the addition of the optional 1/4° and 1/2°blocks virtually and conceivable angle to these increments can be established.

- Simple, quick angle set-ups.
- Eliminates calculations, avoids errors.
- Lightly magnetized for better holding.
- Manufactured of steel, hardened, stabilized and ground.
- Sizes: 3″ long x 1/4″thick. (75mm x 6mm)
- Accuracy: .0001″ per inch.
- Oil-hardened steel, precision ground. 12pcs angle blocks (1/4°,1/2°,1°,2°,3°,4°,5°,10°,15°,20°,25°,30°)

Universal Angle Block Set

No sine plate, sine vise, angle chart or gauge block needed!

- A slope at any angle can be provided by installing a block or blocks on a machine vise up to 5%
- 8 pieces in a deluxe wooden box include: 10°,15° & 30° vee blocks and 5 angle plates-1° to 5° for AB-164
- Heat treated 45°-50° HRC & ground to 10 sec.
- 9pcs angle blocks (1/2°,1°,2°,3°,4°,5°,10°,15°,30°,) for AB-163

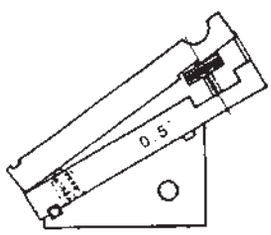
m/m

ORDER NO.	L X W X H	WEIGHT (KGS)	CODE NO.
AB-163	Vee blocks:3″Lx1 3/16″Wx1 3/16″H Angle Plates:2 3/4″Lx1 3/16″Wx 5/64″H	2	2006-010
AB-164	Vee blocks:4″Lx1 1/2″Wx1 1/2″H Angle Plates:4″Lx1 1/2″Wx 5/32″H	3.8	2006-011

Micrometric Tangent Bar & Angle Gauge Block Set

ORDER NO.AB-166 CODE NO.2006-020

WEIGHT:1kg



Micrometric Tangent Bar & Angle Gauge Block Set

- Made of Hardened Steel, Precision Ground.
- Accuracy ±.001″ Per Inch.
- Interlocking Slots.
- Size of Angle Blocks: .35″x3″
  A Complete set for Angular set-ups. No Other Gages Required. Consists os set.
- Simplicity in application.
  Angular set-ups with this are a zip. Just dial your angle direct in degrees and minutes. Add one or two angle block gauges for angles over 5° and Secure assembly by dropping 1/8” dowel or square key into slot provided.
- Complete with fitted case.

Solid Angle Plates

ORDER NO.AB-167 CODE NO.2006-030

WEIGHT:0.3kg

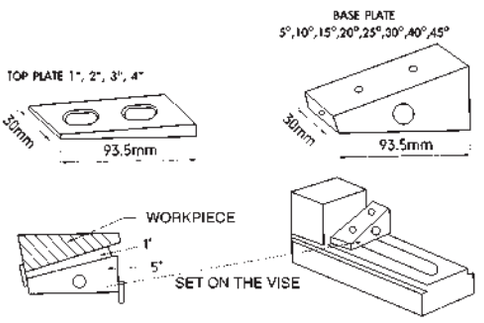
Solid Angle Plates

- Precision ground angles for convenient set-ups in tooling, production and inspection.
- Four holes on top of it for easy mounting.
- 1/4″ Thick, packed in cardboard box.
- Set of 3″x3″x4-3/8″, 45°x45°x90°x1pc
  2″x3-15/32″x4″, 30°x60°x90°x1pc

Precision Angle Blocks

ORDER NO:AB-113(13PCS/SET) CODE NO:2006-040

WEIGHT:7.1kgs



FEATURES

- ANGLE TOLERANCE:0.02MM
- CAN BE ASSEMBLED TOP PLATE WITH BASE PLATE FOR 6˚-9˚,16˚-19˚,26˚-29˚, 36˚-39˚,46˚- 49˚
- HARDEN TREATMENT UP TO HRC55˚-58˚
- MADE BY THE MATERIAL OF SK2
- CAN BE COOPERATE TWO SET FOR USE.

EXAMPLE FOR USE

PLATE	ANGLE DEGREE
TOP PLATE	1˚,2˚,3˚,4˚
BASE PLATE	5˚,10˚,15˚,20˚,25˚,30˚,35˚,40˚,45

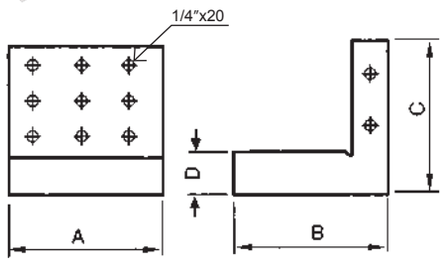
Hardened Steel Squares

Squares have accurate right angles both inside and outside. Made from a single piece of fully tool steel. Beams and blades are ground and accurately lapped for straightness and parallelism. Accuracy Class H Blades are beveled on both edges of each side. Beam is grooved at inner comer for clearance of burr and dirt. All squares are fully hardened (Rockwell 55). Packed in indiviual cartons. Accuracy 0.02mm.

ORDER NO.	L x H x thick	NEW WEIGHT (KGS)	CODE NO.
SS-304	100X75X8MM	0.3	2006-050
SS-306	100X150X8MM	0.6	2006-051
SS-308	130X200X8MM	0.8	2006-052
SS-310	250X160X10MM	1.4	2006-053
SS-312	300X200X12MM	2.2	2006-054

Precision Steel Angle Plates

HIGH PRECISION TYPE



MATERIAL : YK30 ALLOY STEEL
ACCURACY : 0.005/100MM
HARDEN TREATMENT UP TO HRC 58º

ORDER NO.	A	B	C	D	N.W (KGS)	CODE NO.
VRS-33	3″ 75	3″ 75	4″ 100	1″ 25	2.2	2006-060
VRS-44	4″ 100	4″ 100	4″ 100	1″ 25	3.7	2006-061
VRS-46	4″ 100	4″ 100	6″ 150	1″ 25	4.5	2006-062
VRS-85	8″ 200	120	8″ 200	40	14.3	2006-063
VRS-1206	12″ 300	6″ 150	12″ 300	2″ 50	32.3	2006-064

Squares

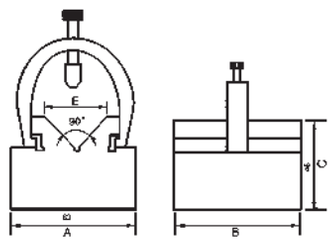
Alloysteel Grounded HRC50

ORDER NO.	LxHxthick	ACCURACY	WEIGHT(kg)	CODE.NO.
FS-204	100x75x6mm	0.02mm	0.2	2006-055
FS-206	150x100x6mm		0.3	2006-056
FS-208	200x130x6mm		0.5	2006-057

V-Block With Clamps

Alloysteel Grounded HRC50

VBC-196



- Two V blocks and two clamps are include in the set.
- Made of hardened tool steel machined & ground in pairs close tolerances.
- A precision set for toolmakers & machinists.

ORDER NO.	A	B	C	E	N.W. (kgs)	CODE.NO.
VBC-195	63	63	46	34	3.1	2007-001
VBC-196	100	50	60	60	5.9	2007-002
VBC-197	150	65	100	110	14.7	2007-003

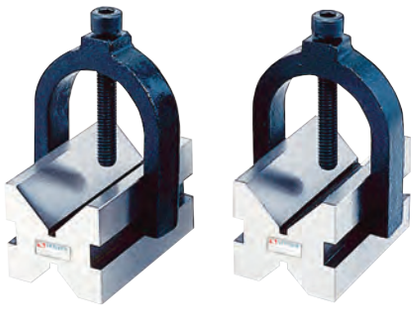
V-Block With Clamps

Alloysteel Grounded HRC50

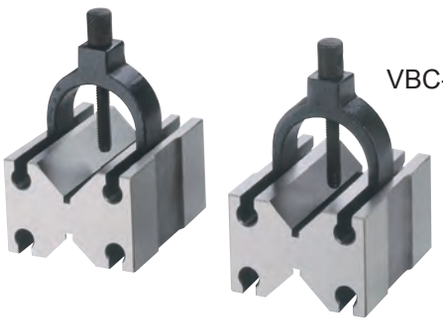
PAIRS

VBC-003

VBC-243



VBC-006



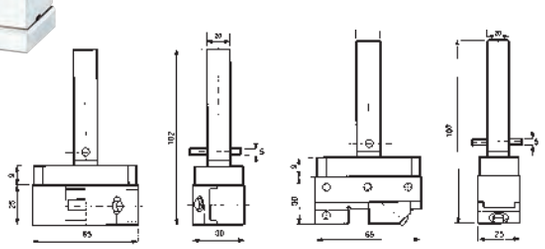
VBC-009

ORDER NO	W	H	L	W.OF SMALL VEE	W.OF LARGER VEE	PACKIN	G.W. (kgs)	CODE NO.
VBC-003	2.36 60mm	1.86 50mm	2.75 70mm	-	50mm	110x80x110mm	2.4	2007-010
VBC-243	2 3/4 70mm	1 3/4 45mm	1 5/8 42mm	-	1″	75x80x100mm	1.9	2007-020
VBC-006	2 1/2 64mm	1 3/4 45mm	2 3/4 70mm	1	$1\frac{3}{16}$″	110x80x110mm	2.6	2007-030
VBC-009	4 102mm	3 76mm	3 76mm	-	$2\frac{1}{4}$″	70x50x110mm	3.9	2007-040

Electrode Vise

ORDER NO.VEH-20 CODE NO.2008-001 (ALLOY STEEL) FOR EDM

WEIGHT:0.8kg



ELECTRODE HOLDERS FOR ELECTRO DISCHARGE MACHINE

Mini vise can be used in fixed electrode holders.

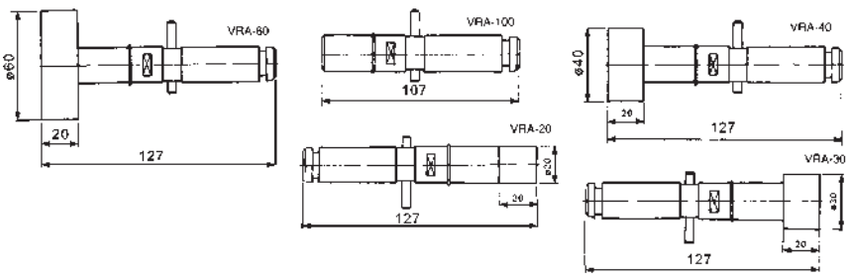
The opening with a cross V groove on the vise can do electric discharging both by vertical way and horizontal way for various-shape workieces.

The max. opening on the vise is 20mm.

MATERIAL	LENGHT	WIDTH	JAW OPENING	JAW HEIGHT	HARDEN
SKS	65	25	20	0.8	HRC58°-60°

Electrode Holders

FOR EDM

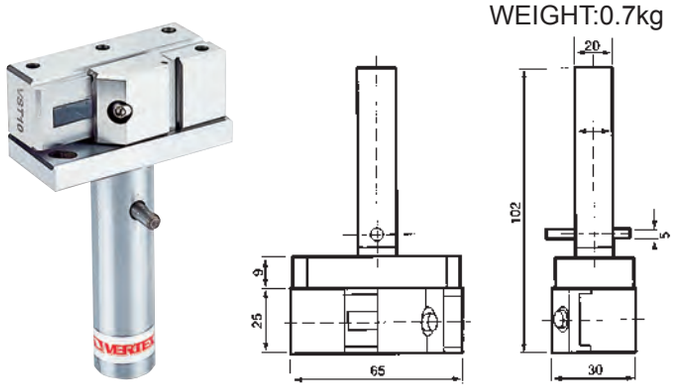


ORDER NO.	VRA-20	VRA-30	VRA-40	VRA-60	VRA-100
WEIGHT(KG)	0.2	0.4	0.5	0.9	0.3
CODE NO.	2008-010	2008-011	2008-012	2008-013	2008-014

Electrode Holders

ORDER NO.VEH-20MS CODE NO.2008-020 (STAINLESS)FOR EDM

WEIGHT:0.7kg

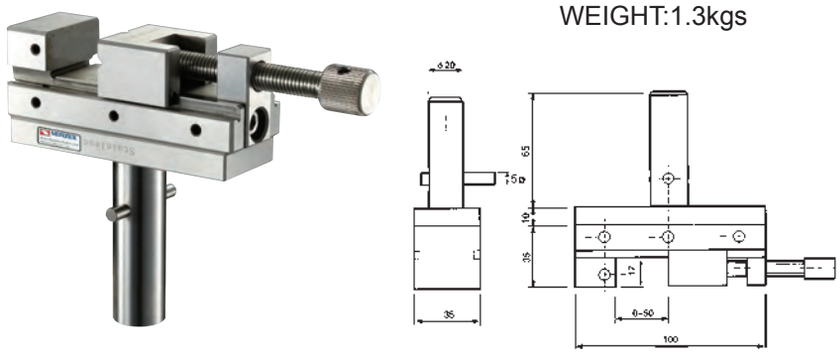


Material	SUS440
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment up to HRC58°	

Electrode Holders

ORDER NO.VEH-20DS CODE NO.2008-030 (STAINLESS)FOR EDM

WEIGHT:1.3kgs

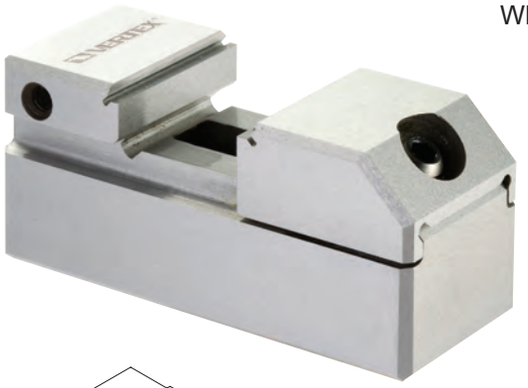


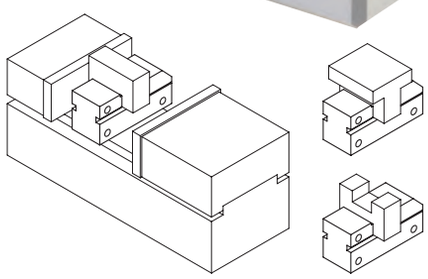
Material	SUS440
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment up to HRC58°	

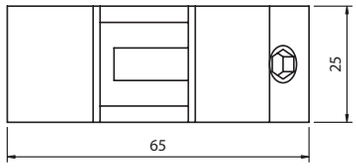
Tool Maker Vise (STAINLESS)

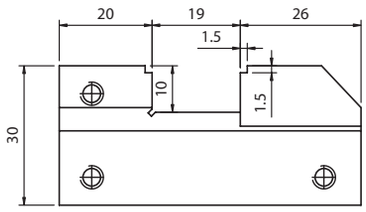
ORDER NO.VSTV-10V CODE NO.2008-070 MINI TYPE FOR EDM

WEIGHT:0.3kg Squareness:Within0.005m/m









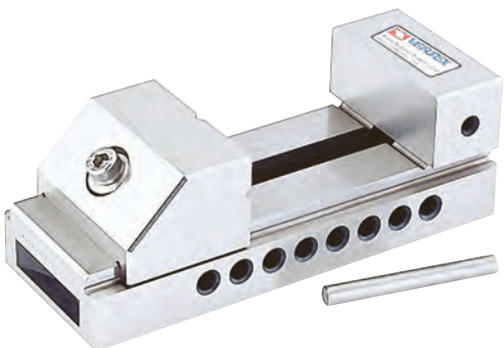
Tool makers vise of mini type which can be put in a bigger vise to process the small and precise workpiece. Also it can be used in an E.D.M. machine and grinding machine. Squareness and parallelism: within 0.003 m/m

MATERIAL	LENGHT	WIDTH	JAW OPENING	JAW HEIGHT	HARDEN
SUS440	65	25	19	10	HRC56°-58°

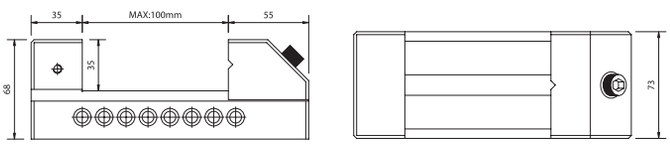
Tool Maker Vise (STAINLESS)

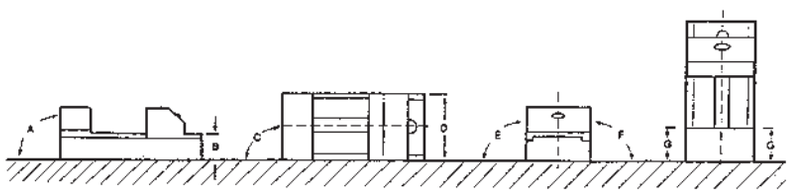
ORDER NO.VBST-30 CODE NO.2008-075 **FOR EDM**

WEIGHT:4.5kgs



Material: SUS440
Hardness: HRC58º~60º
Squareness: Within 0.005 m/m





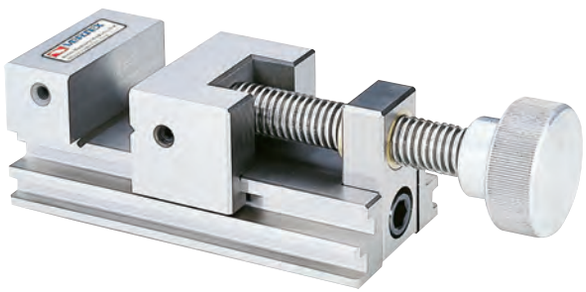
Unit:m/m

TOLERANCE	
A	±0.004m/m
B	±0.005m/m
C	±0.005m/m
D	±0.005m/m
E	±0.005m/m
F	±0.005m/m
G	±0.005m/m

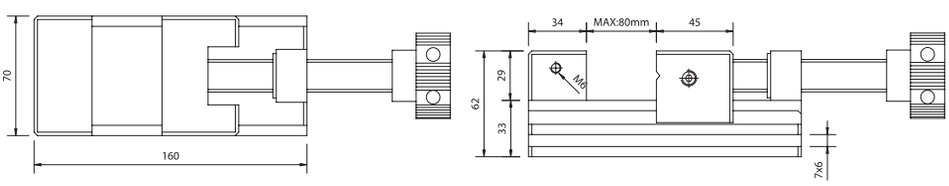
Tool Maker Vise (STAINLESS)

ORDER NO.VSTV-25 CODE NO.2008-080 **FOR EDM**

WEIGHT:4.4kgs



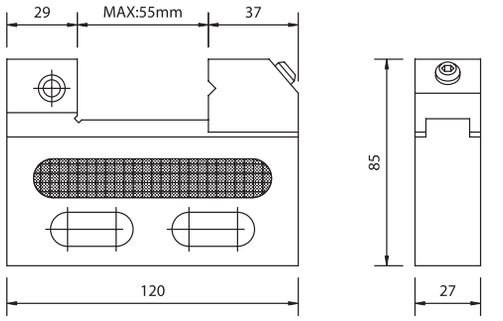
Material: SUS440
Hardness: HRC56º
Squareness: Within 0.005 m/m
It was made by tool steel of stainless steel system and was precision ground after hardened by heat treatment. So, it well not be rusted even though permeation.
The vise can pinch workpiece which will not upward for using moveable method.
It is getting more easier and convenient for processing in a smaller workpiece.



EDM Tool Marker Vise (STAINESS)

ORDER NO.VSTV-50W CODE NO.2008-040

WEIGHT:1.4kgs



This vise is for wire cutter use. Each of the parts was manufactured by stainless steel and with the appliance of high erosion resisting.

Material: SUS440
Hardness: HRC58º~60º
Squareness: Within 0.005 m/m

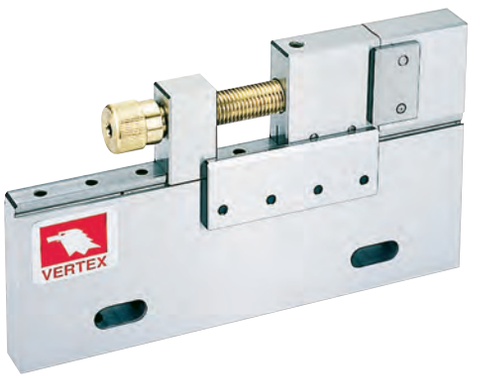
PARALLELISM	±0.002mm/100mm
SQUARENESS	±0.002mm/100mm

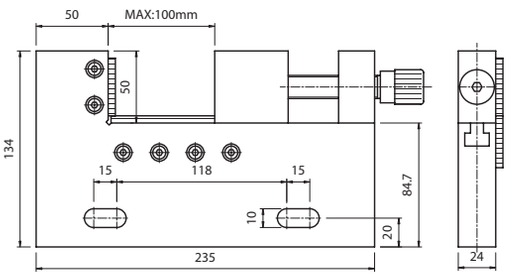
MAX.OPENING	55mm
THICKNESS	27mm
JAW DEEP	25mm
N.W	1.01kgs
MATERIAL	SUS440
HARDNESS	HRC54º±2º

EDM Tool Maker Vise (STAINLESS)

ORDER NO.VSTV-100W CODE NO.2008-050

WEIGHT: 4.88kgs





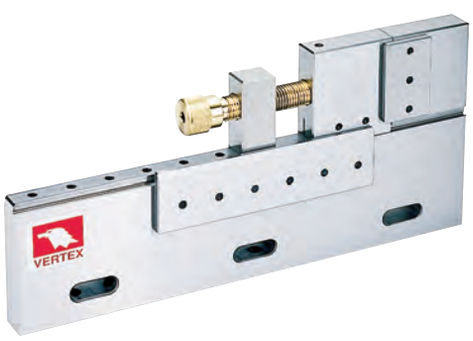
PARALLELISM	±0.002mm/100mm
SQUARENESS	±0.002mm/100mm

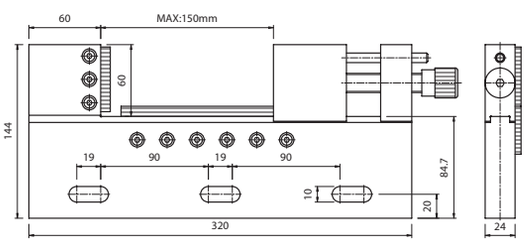
MAX.OPENING	100mm
THICKNESS	24mm
JAW DEEP	50mm
N.W	4.88kgs
MATERIAL	STAINLESS
HARDNESS	HRC54º±2º

EDM Tool Maker Vise (STAINLESS)

ORDER NO.VSTV-150W CODE NO.2008-060

WEIGHT: 6.75kgs





PARALLELISM	±0.002mm/100mm
SQUARENESS	±0.002mm/100mm

MAX.OPENING	150mm
THICKNESS	24mm
JAW DEEP	60mm
N.W	6.75kgs
MATERIAL	STAINLESS
HARDNESS	HRC54º±2º

EDM Wire (BRASS & COPPER)

Zinc COATING IS ALSO AVAILABLE

FEATURES

CHEMICAL COMPOSITION

65/35 brass equivalent to Alloy No. JIS-H3260 C2700

NO ACID-CORROSION AND NO DAMAGE TO RESINS

The special treatment avoids acid-corrosion on machine and workpiece.

HIGH SURFACE QUALITY

The special treatment makes the wire surface smooth, free from dirt, rust and grease that causes unefficiency to electric discharge.

STANDARD WEIGHT CONTROL

By perfect control in process, we obtain the standard weight per coil that enables us to maintain the stability of processing time and the accuracy of drawing.

NO WELDMENT

The rough surface caused by welding could affect the quality and accuracy of performance. The welded wire tends to break that wastes the time to re-thread.

HIGH-DIMENSIONAL PRECISION

Wire diameter tolerance and roundness tolerance are both limited to 1/ μ m.

OUTSTANDING STRAIGHTNESS

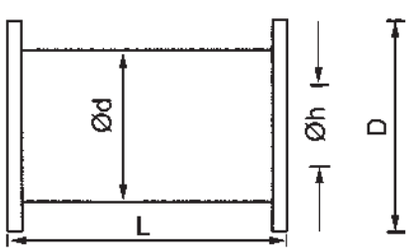
Outstanding straightness ensures automatic threading successfully.

SPECIFICATION

ORDER NO.	WIRE TYPE	DIAMETER		DIAMETER TOLERANCE (mm)	BREAKING LOAD (kgs)	TENSILE STRENGTH (N/mm^2)	ELONGATION (%)	SUITFUL WORKING STYLE	CODE NO.
		inch	mm						
VEW-10H	HARD	0.004	0.10	±0.001	0.78	980≦	0.4≦	STRAIGHT CUTTING a.PASS CUTTING b.ROUGH CUTTING c.FINISH CUTTING	2009-001
VEW-15H		0.006	0.15		1.73				2009-002
VEW-20H		0.008	0.20		3.14				2009-003
VEW-25H		0.010	0.25		4.92				2009-004
VEW-30H		0.012	0.30		7.07				2009-005
VEW-33H		0.013	0.33		8.55				2009-006
VEW-20S	SOFT	0.008	0.20	±0.001	1.41	441≦	15≦	ANGLE CUTTING	2009-010
VEW-25S		0.010	0.25		2.21				2009-011
VEW-30S		0.012	0.30		3.18				2009-012

THE PACKIING USED A STANDARD COIL.
HERE SHOW 3 KINDS OF COIL PACKING OF TYPE FOR CHOICE. THE POPULAR IS

P-5R (5kgs). OTHER COIL TYPE, WEIGHT. WELL BE AVAILABLE.



PACKING COIL TYPE	COIL SHAPE	WIGHT OF WIRE ON COIL (kg)	DIAME-THE OF WIRE (mm)	D (mm)	d (mm)	L (mm)	h (mm)	LENGTH OF WIRE ON COIL (M)	NUMBER OF COILS /BOX	CODE NO.
P-3R		3	0.10 0.15 0.20 0.25	130	80	110	20	39360 18750 10988 6932	6	2009-021
P-5R		5	0.20 0.25 0.30 0.33	160	90	114	20	18314 11553 8001 6750	4	2009-022
K-125		3.5	0.2 0.25	125	80	125	20	5600 4725	4	2009-023
K-160		7	0.20 0.25	160	100	160	22	25640 16174	2	2009-024

Wire Dies Guide

Used to guide wire in wire electro-discharge machimes.

ORDER NO.	MAKER	APPLICATION	REMARKS	CODE NO.
M118	MITSUBISHI	SX, CX, FX Upper 上 (線切割眼模 M118)	C 834G	2009-030
M119		SX, CX, FX Lower 下 (線切割眼模 M119)	B 243G	2009-031
M103 Ø3		F, FL, G, Opening Ceramic Stainless (眼模螺絲 Stop screw M108)	D 162G D 123G	2009-032
M108				2009-033
M111		G, H~HA, C, CR, (偏心座 Dies Holder M111)	X 184D226H01	2009-034
M117 Ø4		H1, HA, B, Z SK/AF Lower 下 (線切割眼模 M117)	B 176G	2009-035
M107		H1, HA, B, Z SK/AF Upper 上 (線切割眼模 M107)	B123G	2009-036
M120		H1, A, B, Z/AF Upper 上 (眼模螺絲 Stop screw M120)	C524G	2009-037
Z141		Ceramic Guides for Small Hole EDM machine (放電打孔機用導管 Z141)		2009-038
S103	ソデツク SODICK	A300, 500, Aw330, 450 EPOC, AP, BF (線切割眼模 S103)	GUIDE (87-3)	2009-039
S111	SEIBE	F, K Upper & Lower (線切割眼模 S111)		2009-040
H102	HITACHI	H1-Cut 203, 304, 345, 460 Lower 下 (線切割眼模 H102)		2009-041
F120	フアナツク FANUC	∞ °A, °B Upper 上 (線切割眼模 F120) ∞ °A, °B Lower 下 (線切割眼模 F121)		2009-042
F121				2009-043
F101 **F102**		O, P, Q, R, W Upper & Lower 上、下 (線切割眼模 F101, F102)		2009-044
F123		^{1}A, ^{1}B, Upper 上 (線切割眼模 F123) ^{1}A, ^{1}B, Lower 下 (線切割眼模 F124)		2009-045
F124				2009-046

Electrode (Copper & Brass Pipe Electrode)

STD. STYLE

SUPER 8 STYLE

- BRASS PIPE FOR STEEL & TREATMENT STEEL. COPPER PIPE FOR TUNGSTEN MATERIAL & SMALL HOLE.
- SUPER STYLE HOLE COPPER PIPE FOR HIGH SPEED MACHINNING & NON THROUGH HOLE.
- THE LENGTH 300MM OR 400MM OF PRICE IS SAME. PLEASE NOTIFY THE LENGTH WHEN YOU ORDERING.
- EAH UNIT PRICES IS 20 PCS.

STANDARD STYLE HOLE

MATERIAL \ HOLE DIA.		0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
BRASS	ORDER NO.	VEB-04	VEB-05	VEB-06	VEB-07	VEB-08	VEB-09	VEB-10	VEB-11	VEB-12	VEB-13	VEB-14	VEB-15
	CODE NO.	2010-001	2010-002	2010-003	2010-004	2010-005	2010-006	2010-007	2010-008	2010-009	2010-010	2010-011	2010-012
COPPER	ORDER NO.	VEP-04	VEP-05	VEP-06	VEP-07	VEP-08	VEP-09	VEP-10	VEP-11	VEP-12	VEP-13	VEP-14	VEP-15
	CODE NO.	2010-030	2010-031	2010-032	2010-033	2010-034	2010-035	2010-036	2010-037	2010-038	2010-039	2010-040	2010-041

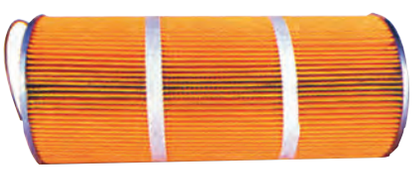
MATERIAL \ HOLE DIA.		1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7
BRASS	ORDER NO.	VEB-16	VEB-17	VEB-18	VEB-19	VEB-20	VEB-21	VEB-22	VEB-23	VEB-24	VEB-25	VEB-26	VEB-27
	CODE NO.	2010-013	2010-014	2010-015	2010-016	2010-017	2010-018	2010-019	2010-020	2010-021	2010-022	2010-023	2010-024
COPPER	ORDER NO.	VEP-16	VEP-17	VEP-18	VEP-19	VEP-20	VEP-21	VEP-22	VEP-23	VEP-24	VEP-25	VEP-26	VEP-27
	CODE NO.	2010-042	2010-043	2010-044	2010-045	2010-046	2010-047	2010-048	2010-049	2010-050	2010-051	2010-052	2010-053

SUPER 8 STYLE HOLE COPPER & BRASS PIPE ELECTRODE

MATERIAL \ HOLE DIA.	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
ORDER NO.	VES-06	VES-07	VES-08	VES-09	VES-10	VES-11	VES-12	VES-13	VES-14	VES-15
CODE NO.	2010-060	2010-061	2010-062	2010-063	2010-064	2010-065	2010-066	2010-067	2010-068	2010-069

MATERIAL \ HOLE DIA.	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
ORDER NO.	VES-16	VES-17	VES-18	VES-19	VES-20	VES-21	VES-22	VES-23	VES-24	VES-25
CODE NO.	2010-070	2010-071	2010-072	2010-073	2010-074	2010-075	2010-076	2010-077	2010-078	2010-079

EDM Filter For EDM (Oil)



Unit:mm

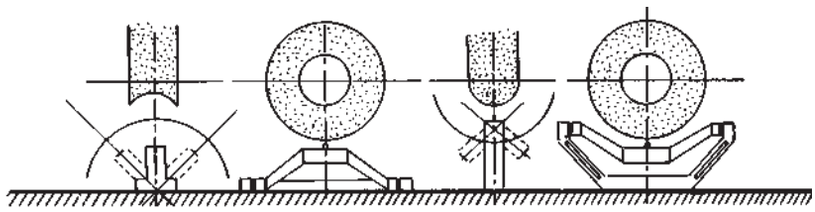
ORDER NO.	OUTER DIA.	INNER DIA.	LENGTH	SUITABLE MODELS	WEIGHT (kg)	CODE NO.
NH-01	150	72	450	SEIBU.JAPAX.SODICK.AMADA	1	2011-001
NH-09	150	33	360	CHARMILLES.AGIE.MITSUBISHI	0.8	2011-002
NH-09S	150	91	309		1.2	2011-003
NH-600L	150	26	600	WITH STEEL NET	1.2	2011-004

Tangimatic Dresser

ORDER NO.V-TDA CODE NO.2012-001

WEIGHT:7kgs

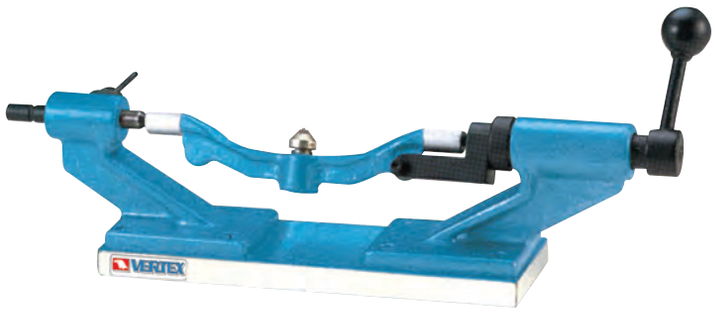
The dresser can be dressing any concave or convex of grinding wheel
Concave R:0-40R(mm)
Convex R:0-90R(mm)
Max. wheel DIA.:8″(200mm)
Diamond dresser pen 10mm



Tangimatic Dresser Handy Type

ORDER NO.V-TDH CODE NO.2012-002

WEIGHT:4.5kgs

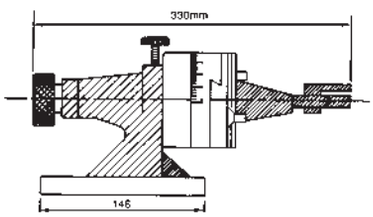


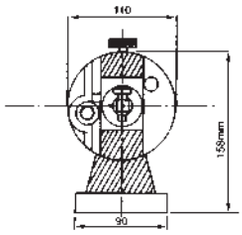
The dresser can be dressing any concave or convex of grinding wheel
Convex R:0-90R(mm)
Concave R:0-40R(mm)

Radius And Angle Dresser

ORDER NO.V-TDB CODE NO.2012-010

WEIGHT:11.5kgs





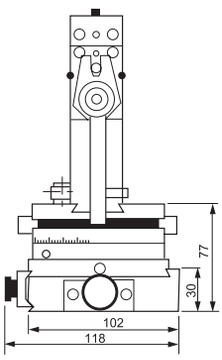
Convex dressing range: 0.8R-40R
Concave dressing range: 0-40R
Max. wheel dressing diameter: 250mm
Max. wheel extending diameter: 375mm

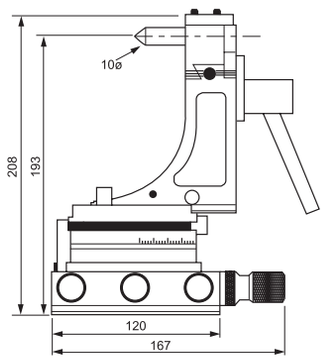
- Positive setting of the diamond to absolute center with the special gage included with the dresser.
- Simple, fast, accurate radius setting; no height gage or other set-up aids required. Radius is set on the grinder by measuring over the two pins or by inserting a gage block, as shown, for direct reading. Inside or outside radius is determined simply by sliding the dowel pin to the right for concave and to the left for convex.
- 4x90° gaduation in full 360° circle. 6 Minute vernier reading. Chrome plated.
- One push-pull type knob for radius and angle control and for safer and faster operations.
- ACCURACY. Exteremely close tolerances are held in the manufacture of this tool, assured by hardening and precision grinding of all critical parts. Ways are chrome hardened.
- ECONOMY. Set-up and dressing time reduced to a bare minimum due to simplicity.

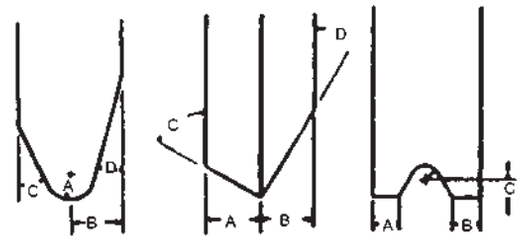
Universal Wheel Dresser

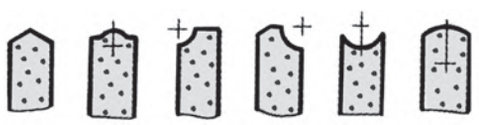
ORDER NO.V-TDC CODE NO.2012-020

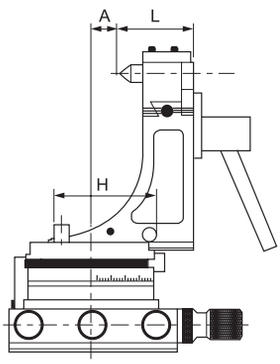
WEIGHT:7.8kgs











The wheel dresser that dresses two angles tangent to a radius in one continuous motion with .0001~0.0002m/m accuracy.
The wheel dresser with a micrometer feed-0.98″(25mm) travel.

SIMPLE-ELIMINATES HEIGHLY SKILLED OPERATORS

Fluidmotion means YOU CAN dress two angles tangent to a radius in one continuous motion-with only one setting. The diamond automatically returns to center position after dressing angles. Thus even a beginner can dress complex froms quickly and accurately. (center height 195mm)

ELIMINATES ELABORATE SETUPS

No need to pre-set diamond, or use any other tool except a micrometer and a simple hex wrench.
No Gage block-Master Gage setting or Block-Parallel Bar-Surface Plate-Height Gage-Dial Indicator.
No movement of dovetails necssary to form angles. The angle is dressed by continuing to push handle in both directions after radius is formed.
No need to use Gibs & V-Ways other than positioning surfaces.

ACCURATE-RAPID, REPAT FORM-DRESSING

Fluidmotion generates clean, precise wheel profiles entirely free of chatter marks. Without fluidmotion a perfect blend of angles and radius is improbable.

PRECISE SHARP CONTOURS-concave or convex, at a full 180 degrees, are obtained consistently with (GUARANTEED) 0.001″ accuracy.

CONVEX RANGE-0R-76.2R
CONCAVE RANGE-0.8R-88.9R
ACCURATE...FLUIDMOTION...PRECISE...

HOLD INTERSECTING ANGLES 12 to 15 seconds. This is accomplished by operating upright and handle.
Setting up two angles requires 10 seconds. Setting two angles and radius requires less than 3 minutes.

THE MOST DURABLE DRESSER AVAILABLE

Manufactured from hardened, ground and lapped alloy steels.
No wearing surfaces. Swivels on sealed bearings.
This form tangent in one setting-two angles-two radius-one flat.
MAX. Swing distance of diamond cutter.....±14mm
Measuring guasi-pin dia.....ø10
MAX. Wheel dia.....ø200mm
Reading accuracy of turret index.....5′
Feed per division of handle scale.....0.01mm

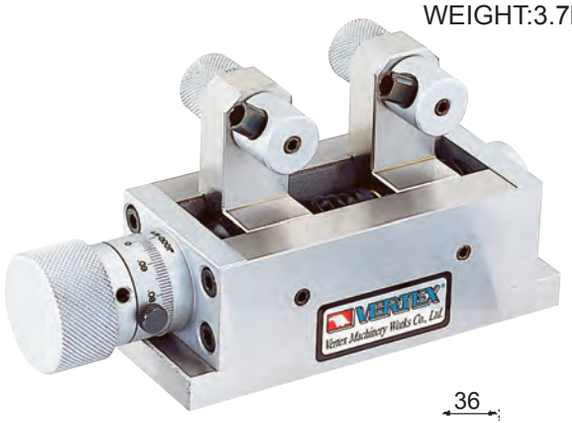
Calculation Methond

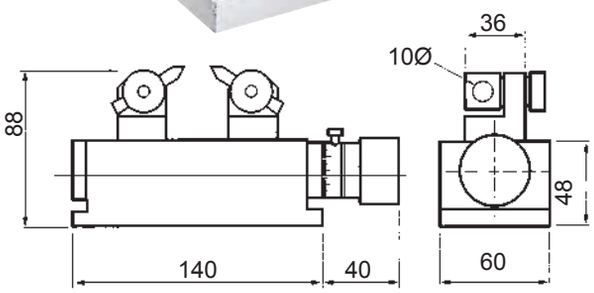
To dress convex arc surface: H=L + R
To dress concave arc surface: H=L +(-R)
H: Distance between outer generating lines of two locating pins.
R: Radius of the arc surface to be dressed
L: Distance from tip of diamond cutter to base plate

Precision Duplex Dresser

ORDER NO.V-TDF CODE NO.2012-030

WEIGHT:3.7kgs



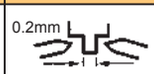


FEATURES

PRECISION DUPLEX DRESSER is designed to simultaneously dress both sides of a grinding wheel, precisely and without deformation.
It is useful for the thining of grinding wheels or the dressing of thin wheels. manufactured of tool steel and hardened through out to HRC 60 for life time use.

Specifications:

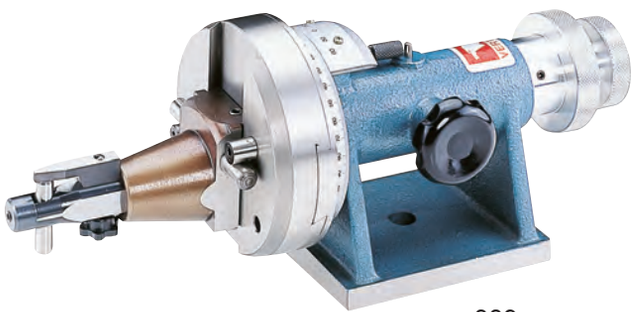
Max. width of wheel.....40mm(1-9/16″)
Max. dressing depth.....40mm(1-9/16″)
Mini dressing width.....0.2mm(0.0079″)
Graduation.....0.02mm(0.0001″)

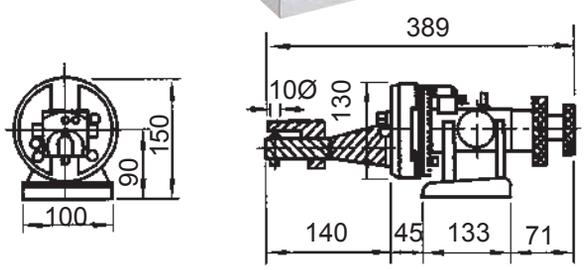
Max.thickness	Min.	Max.	Min
			0.02mm/div

Radius And Angle Dresser

ORDER NO.V-TDG CODE NO.2012-040

WEIGHT:12kgs





FEATURES

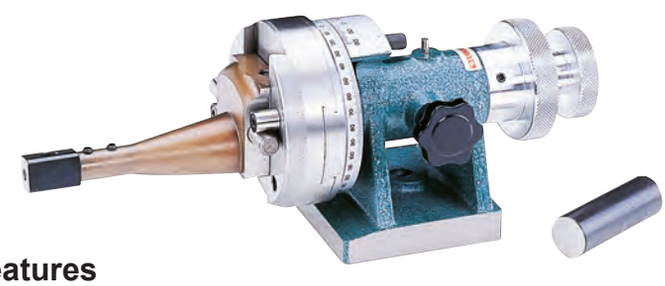
- 6 minute vernier reading.
- 5-1/2″ longx6-1/2″ high.
- Dual purpose knob for drum & angle movement.
- Stop for concave and convex radius.
- Comes with setting gage for diamond tool.

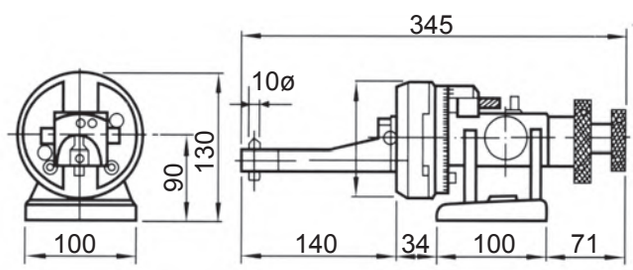
Specifications:
Max. wheel diameter, standard.....11″
Concave radius with standard diamonds.....0-2 1/4″
Concave radius with rta-tail diamonds.....0-2 1/4″
Convex radius.....0-4″
Tangent travel in either direction.....1.950″
Center line.....3.4″

Radius And Angle Dresser

ORDER NO.V-TDE CODE NO.2012-050

WEIGHT:9.2kgs





Features

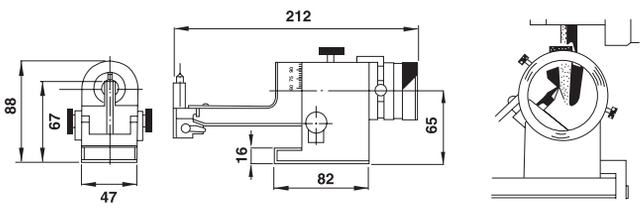
- No height gauge or set-up aids required.
- Radius is set on the grinder by measuring over the two pins or by inserting a gauge block for direct reading.
- Concave radius or Convex radius is determined by using either the left or right hand pins.

Grinding wheel dressing application

Optical Radius Angle Dresser

ORDER NO.V-TDT CODE NO.2012-060

WEIGHT:4.3kgs



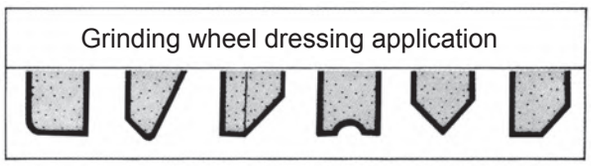
Features

Universal Wheel Dresser is Adoptable on Surface grinder and universal tool grinder for dressing grinding wheel into various cross sections of flat or curved shapes.
By “SIGHTING” the diamond point through the lens, radius and angles can easily be made perfectly tangent Visu ally Even with diamonds. Likewise radius can be blended together with most unbelievable accuracy.

Specification

Center height.....65mm
Max. wheel diameter.....200mm
Max. convex radius.....10mm
Max. concave radius.....25.4mm
Dressing angle.....95º-0º-95º
Tangential travel.....Appo x 22.5mm

Grinding wheel dressing application

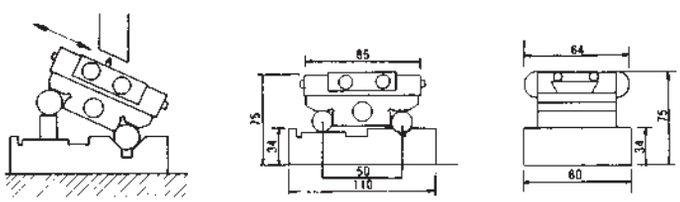


Matco Sine Dresser

ORDER NO.VP-50 CODE NO.2012-070

WEIGHT:2.5kgs

- This fine precision-made unit dresses grinding wheels to any angle from 0º-60º degrees with new smoothness and accuracy.
- The cross feed up to 50mm, center distance 0.01mm, Sine angle absolutely accurate.



SPECIFICATION

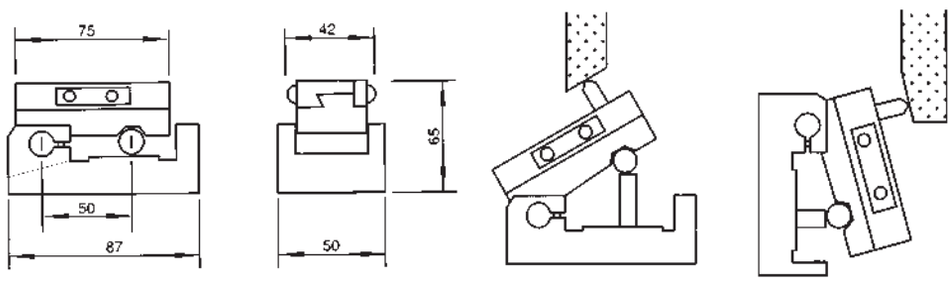
BLOCK CENTER DISTANCE	CENTER TOLERANCE	MAX CROSS FEED
50	±0.01	50

Matco Sine Dresser

ORDER NO.V-50D CODE NO.2012-080

WEIGHT:1.6kgs

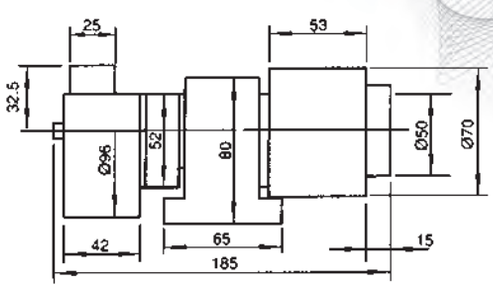
This fine precision-made unit dresses grinding wheels to any angle from 0º-60º degrees with new smoothness and accuracy.
The cross feed up to 50mm, center distance 0.01mm, Sine angle absolutely accurate.



Diamond Wheel Dresser

ORDER NO.V-TDD CODE NO.2012-090

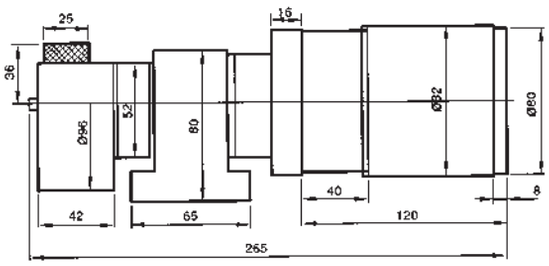
WEIGHT:4.6kgs



This device is suitablly used for Diamond Grinding wheel.
The surface is treated with blaze-dried lacquer.
Axis part is fixed with shaft bearing and can be rotated in high speed & with great precision.

- Sand wheel size: Ø75x26x12.7 ØWA80

Motor Type CBN Flat Wheel Dresser



SAND WHEEL SIZE: Ø75x25x12.7 ØWA80

Unit: mm

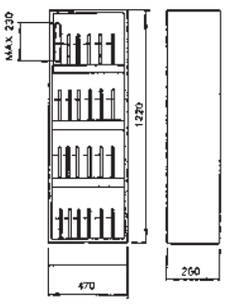
ORDER NO	VOLTAGE	RPM	WEIGHT (kgs)	CODE NO.
V-TDM-1	110V	129	6.5	2012-100
V-TDM-2	220V	108	7.1	2012-101

5.5KGS, SINGLE PHASE 0.07HP

Wheel Hanger

ORDER NO.VWH-24, VWH-32
CODE NO.2013-001, 2013-002

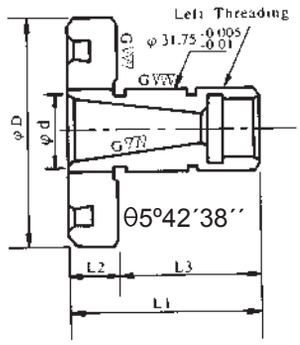
WEIGHT:23.1kgs



VWH-24 (24pcs)

VWH-32 (32pcs)
653Wx600Dx1460H mm
(excl. wheel height)

Grinding Wheel Flang



Unit: mm

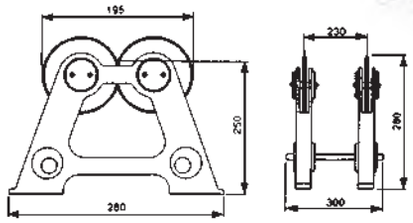
ORDER NO.	ØD	Ød	L1	L2	L3	Brand Mark	WEIGHT (kg)	CODE NO.
FKT-250	78	25.7+0 -0.05	40	13	27	KENT PROTH	0.8	2013-010
FTA-350	75	25.4+0 -0.05	40	13	34	TA TUNG	1	2013-011

Wheel Balancing Stand

ORDER NO.WBS-300 CODE NO.2014-001

WEIGHT:12.5kgs

MAX.WHEEL DIAMETER ALLOWED Ø 400mm



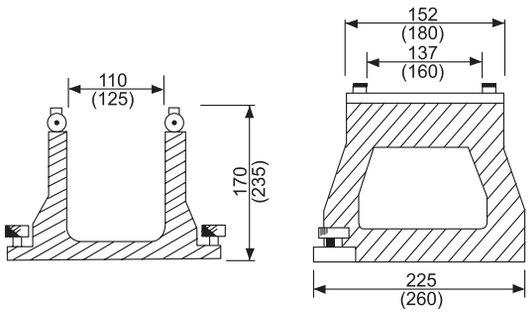
The stand is specifically designed to improve accuracy and longer life for grinding. It is finished with cast iron and fine through hardened to HRC55º.

Level Balancing Stand

ORDER NO.LBS-100
CODE NO.2014-010
WEIGHT:8.8kgs

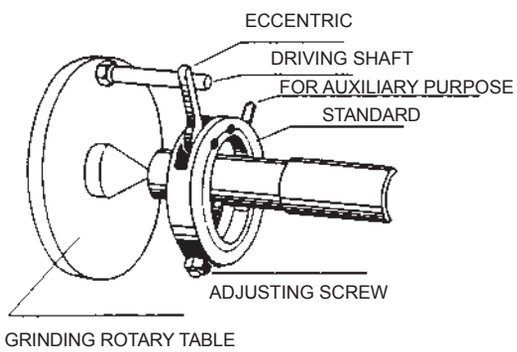
ORDER NO.LBS-350
CODE NO.2014-011
WEIGHT:15.1kgs

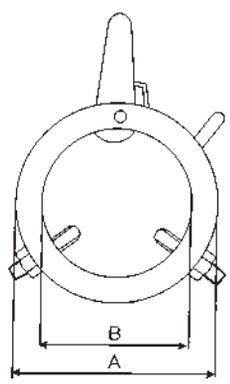
( )For LBS-350



This machine encloses minute leveling instrument. The adjustment of horizontal enable rapidly and accurately.
MAX.WHEEL DIAMETER ALLOWED Ø200mm, Ø350mm

Driving Carrier





FEATURES:

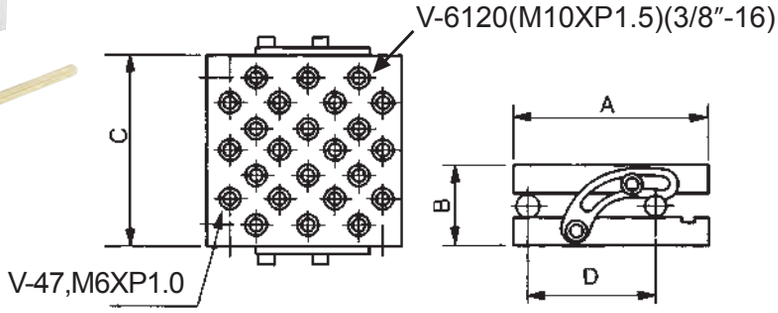
- SUITABLE FOR GRINDING OF SHAFTS.
- EASY ATTACH AND DETACH BY ONE HAND.

ORDER NO	CAPACITY	A	B	WEIGHT (kg)	CODE NO.
VDC-13	Ø6~Ø14	36	18	0.1	2014-020
VDC-22	Ø13~Ø24	48	28	0.2	2014-021
VDC-30	Ø20~Ø33	58	38	0.2	2014-022
VDC-40	Ø31~Ø42	68	48	0.2	2014-023
VDC-50	Ø36~Ø50	78	58	0.3	2014-024
VDC-60	Ø40~Ø62	89	68	0.3	2014-025
VDC-80	Ø60~Ø80	119	88	0.6	2014-026
VDC-100	Ø80~Ø100	140	109	0.7	2014-027

Sine Plates

Design by the principles of SINE, angle grinding can be done well. High precision of parallelism within 0.002mm and squareness within 0.005 mm. Setup and dressing time reduced to a bare minimum due to simplicity.(ANGLE 0º - 46º)

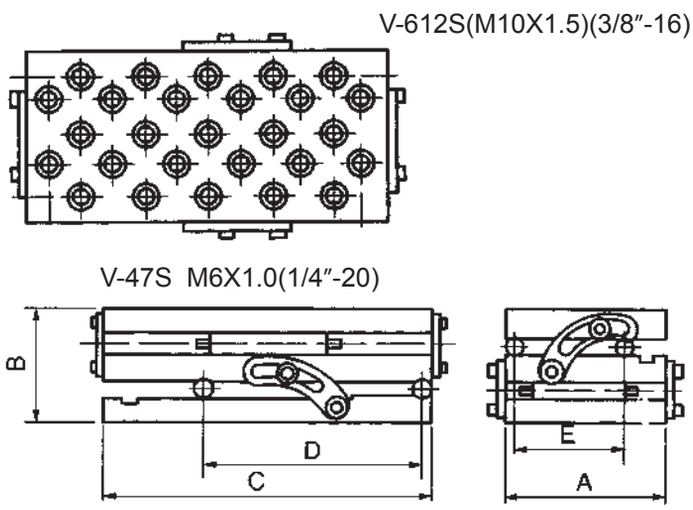
- Made of quality steel, hardened to HRC 55º - 56º
- Two hardened and ground side rails and one.
- Locking strap included.



ORDER NO.	A	B	C	D	N.W (kgs)	CODE NO.
V-47	98	66	177	75	8.4	2015-001
V-66	150	62	150	100	9.4	2015-002
V-6120	147	65	300	100	19.8	2015-003

Compound Sine Plate

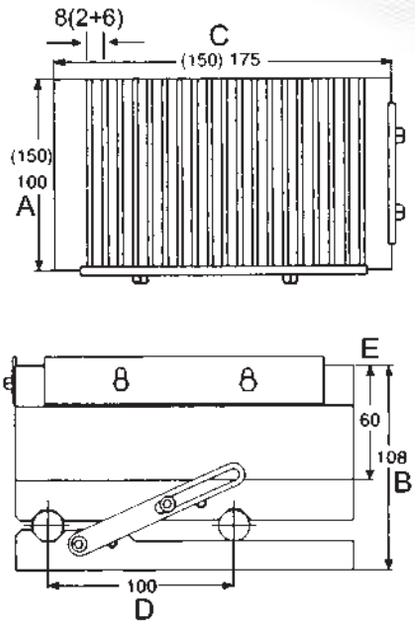
Made of quality steel, hardened to HRC 55º-62º,angles 0º~60º capacity.
Minute angle step 0.2 built into the front gauge block roll eliminates steps in base plate.
Two end rails and one locking strap included
Tapped holes on the top.
Center distance of tools with 0.005mm(0.0001″)V-612S within 0.008mm(0.0003″)



ORDER NO.	A	B	C	D	E	N.W (kgs)	CODE NO.
V-47S	100	100	175	125	75	9.9	2015-010
V-66S	150	100	150	100	100	12.4	2015-011
V-612S	150	100	300	100	100	23.7	2015-012

Magnetic Sine Plate

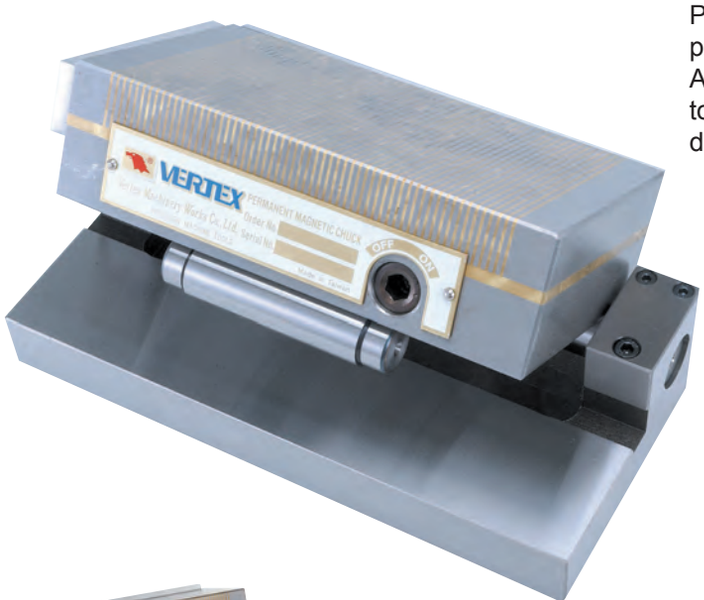
MAGNETIC SINE PLATES with a permanent magnetic, never lose its strong power by press down a screw based on the plate and regain the original after work.

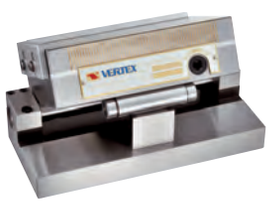


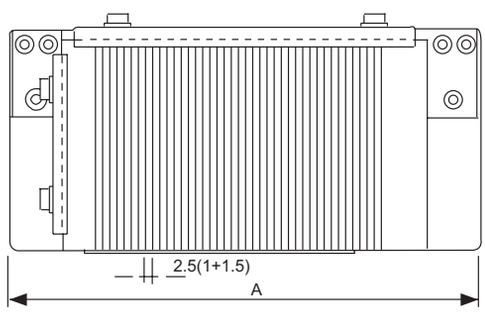
ORDER NO.	A	B	C	D	E	ANGLE	N.W (kgs)	CODE NO.
V-47M	100	108	175	100	60	0˚~55˚	11.3	2015-020
V-66M	150	108	150	100	60	0˚~55˚	15.6	2015-021
V-612M	150	108	300	100	60	0˚~55˚	27	2015-022

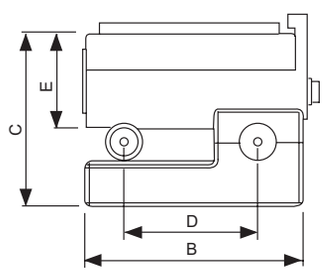
Magnetic Sine Plate With Fine Pole

Permanent magnetic chuck. Removable handle for positive on/off control, side rails, end rails all included. All have 200 minute angle steps with 0.005mm(0.0002″) tolerance in squareness,parallelism and roll center distances. The chuck of pole is 1+1.5







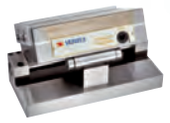


ORDER NO.	A	B	C	D	E	P	ANGLE	N.W (kgs)	CODE NO.
V-47MF	175	102	87	75	47	2.5 (1+1.5)	0˚~60˚	13.1	2015-030
V-66MF	200	152	87	100	47			16.5	2015-031
V-612MF	350	152	87	100	47			30.3	2015-032

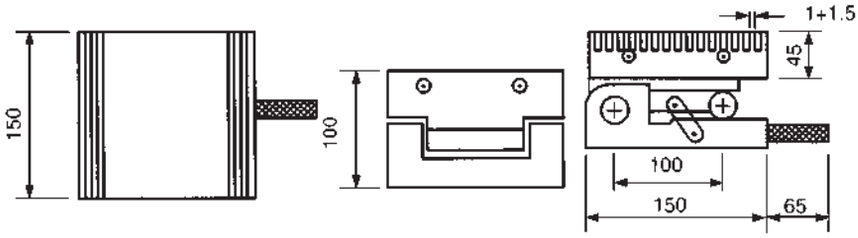
Adjustable Sine Plate With Fine Pole Magnetic Chuck

ORDER NO.V-66SA CODE NO.2015-050

WEIGHT:17.9kgs



The sine plate with magnetic chuck is with high accuracy and stability. From 0º to 60º can be used for angle, the precision is within 0.003m/m.



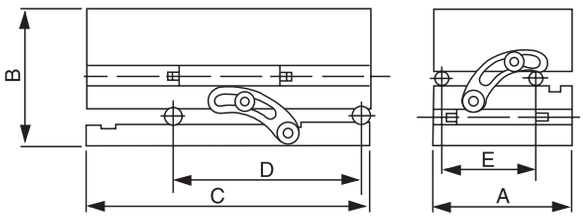
Double Way Sine Plate With Permanent Magnetic Chuck

FEATURES:

- Double way sine plate, can be use to grind two way angle at same time.
- Constructed of hardened alloy tool steel.
- Precise angle setting is obtained with gauge block.
- This device provides positive locking at any angle without distortion.
- A positive locking device is mounted on the base.

Unit:mm

ORDER NO.	A	B	C	D	E	P1	P2	ANGLE	N.W (kgs)	CODE NO.
V-47MS	100	142	175	100	75	6.5 (1.5+5)	7.5 (1.5+6)	0˚~60˚	15.2	2015-060
V-66MS	150	142	150	100	100				18.1	2015-061
V-612MS	150	142	300	200	100				34.7	2015-062



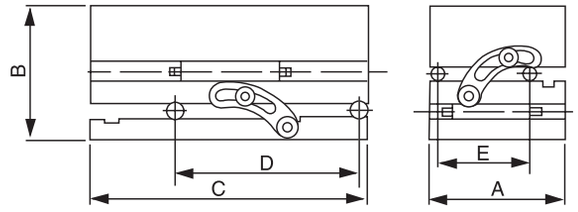
Double Way Sine Plate With Fine Pole Magnetic Chuck

FEATURES:

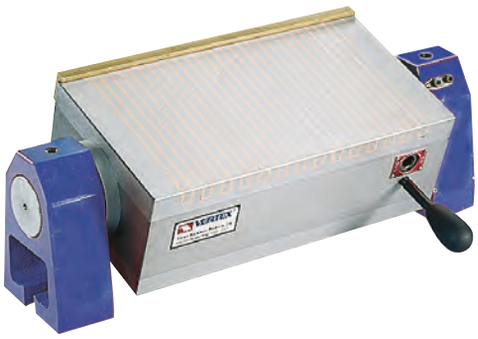
- Double way sine plate, can be grind two way angle at same time.
- Special feature with micropitch magnetic chuck, can fix tiny parts firmly on the chuck.
- Constructed of hardened alloy tool steel.
- Precise angle setting is obtained with gauge block.
- This device provides positive locking at any angle without distortion.
- A positive locking device is mounted on the base.

Unit:mm

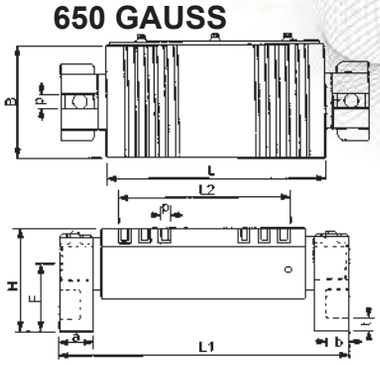
ORDER NO.	A	B	C	D	E	P	ANGLE	N.W (kgs)	CODE NO.
V-47MSF	100	122	175	100	75	2.5 (1+1.5)	0˚~60˚	14.9	2015-070
V-66MSF	150	122	150	100	100			19.8	2015-071
V-612MSF	150	122	300	200	100			35	2015-072



Rotary Permanent Magnetic Plate



650 GAUSS

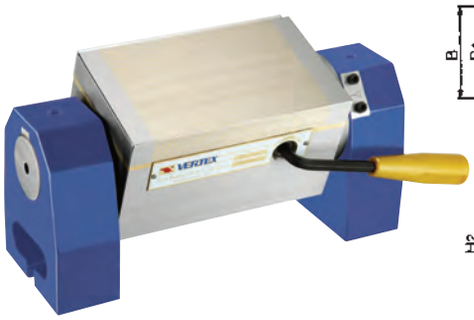


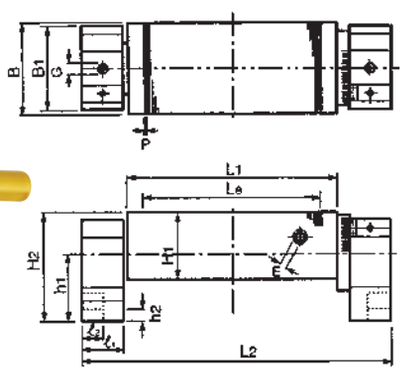
- Can grind the (0º-90º) angle work-piece, could be easily set by graduated collar.

Unit:mm

ORDER NO.	SIZE	OPERATION PLANE			POLE PITCH	ROTARY SEAT PLANE						HEIGHT	WEIGHT	CODE NO.
		B	L	L2	P	a	b	t	F	L1	d	H	KGS	
VLU-510B	125x250	125	250	191	8.5 (2.5+6)	50	35	17	96	380	16	150	33.2	2015-080
VLU-612B	150x300	150	300	245						430			44.5	2015-081
VLU-618B	150x450	150	450	414	8(2+6)		27	15	90	565	-	145	43	2015-082

Rotary Fine Pole Permanent Magnetic Plate





600 GAUSS

APPLICATION

Suitable for (0º-90º) angle grinding on ginder.

FEATURES

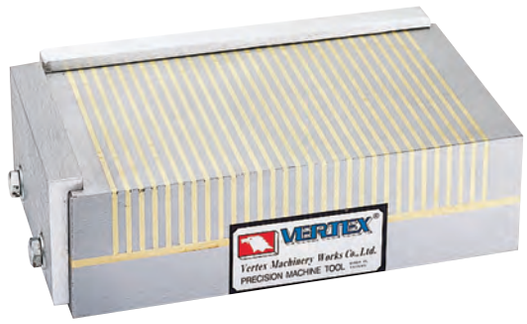
- Rotary shaft with graduation makes it easy to grind at any angle.
- Integrated molding of machine body and rotary spindle.
- Unchanged surface accuracy during ON/OFF change over.
- Design for distance between both magnets enables machining of various unconfirm in thickness & sizes.

Unit:mm

ORDER NO.	Nominal Dimension	Chuck Dimension				POLE PITCH	Length	Rotary Base						HEIGHT	WEIGHT (kgs)	CODE NO.
		B	L1	L2	H1	P	L2	B	ℓ1	ℓ2	G	h1	h2	H2		
VLU-407BF	100X175	100	175	125	78	2 (1+1.5)	293	100	50	25	16	103	50	145	19	2015-090
VLU-510BF	125X250	125	250	200			368								27	2015-091
VLU-612BF	150X300	150	300	246			418								31	2015-092
VLU-614BF	150X350		350	296			468								37	2015-093
VLU-618BF	150X450		450	396			568								43	2015-094

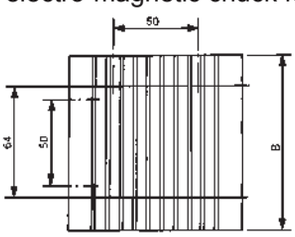
Hi-Power Mini Type Permanent Magnetic Plate

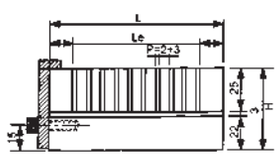
FOR CARBIDE MATERIAL ONLY
CAN NOT FOR ALL STEEL



APPLICATION

This chuck is designed for objects with weaker magnetic force.This chuck can be placed in the plate of large permanent magnetic chuck or electro-magnetic chuck for attraction or attachment.





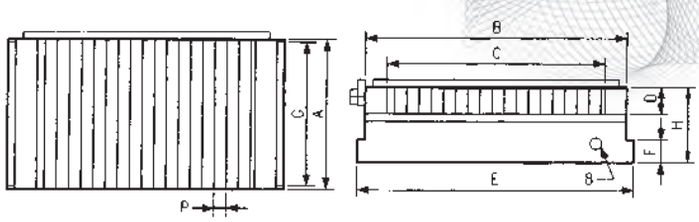
NO ON/OFF SWITCH

Unit:mm

ORDER NO.	DIMENSION	CHUCKING SIZE			POLE PITCH	HEIGHT	TESTING BLOCK	WEIGHT (kgs)	CODE NO.
		B	L	Le	P	H			
VG-404H	100X100	100	100	72	5(2+3)	50	□ 50x25t TEST BLOCK(TUNGSTEN) 210N(21kgf)	4	2015-100
VG-407H	100X180	100	180	152	5(2+3)	50		7	2015-101
VG-410H	100X250	100	250	222	5(2+3)	50		10	2015-102

Angular Permanent Magnetic Plate

MAGNETIC FORCE 18KGF
650 GAUSS



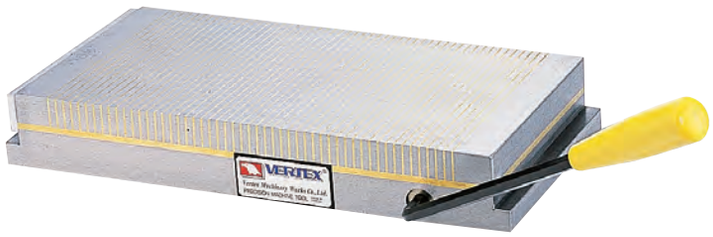
- Permanent magnetic force.
- Operation plane, specially treated, nondeformation and high precision.

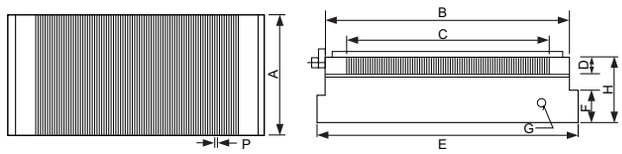
Unit:mm

ORDER NO.	SIZE	CHUCKING SIZE				POLE PITCH	CHUCK MOUNTING FACE			SWITCH TYPE	HEIGHT H	WEIGHT KGS	CODE NO.
		A	B	C	D	P	G	E	F				
VG-407	100x175	100	175	146			100	187				7.2	2015-110
VG-510	125x250	125	250	206			125	262				15	2015-111
VG-612	150x300		300	256				318				18.5	2015-112
VG-614	150x350	150	350	306			150	368				20.9	2015-113
VG-618	150x450		450	406				468				27.5	2015-114
VG-816	200x400		400	365	20	8(2+6)		418	15	LIVING HEXAGON SOCKET SCREW KEYS	50	32	2015-115
VG-818	200x450	200	450	406			200	468				36.3	2015-116
VG-820	200x500		500	456				518				40.4	2015-117
VG-1020	250x500	250	500	456			250	518				50.3	2015-119
VG-606	150x150	150	150	116			150	162				9	2015-121
VG-1224	300x600	300	600	550	18		300	620			48	73.5	2015-122

Middle Pitch Permanent Magnetic Chuck

MAGNETIC FORCE 19KGF
680 GAUSS





APPLICATION

New type of think chuck, in 50mm thickness, for grinding and electrodischarging works, for thin plate or small works, in wide range of applications, it features a wide effective magnetic area on the chucking face.

FEATURES

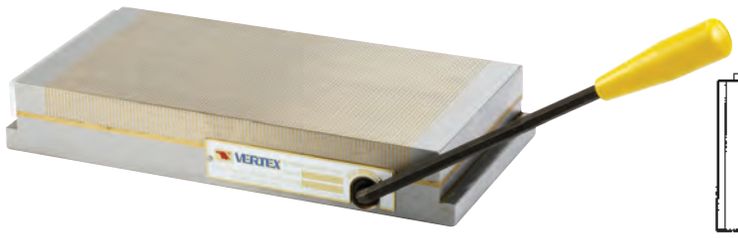
- Thin and light to meet versatile applications.
- Fine-pitched magnetic poles, on this model,make it ideally suitable for small and thin works.
- Hexagonal wrench key is used for the magnetic ON/OFF change over handle it is inserted through the side easily removed and operates quite lightly.
- The chuck surface has a wider effective mgnetic area than other chucks of similar type.

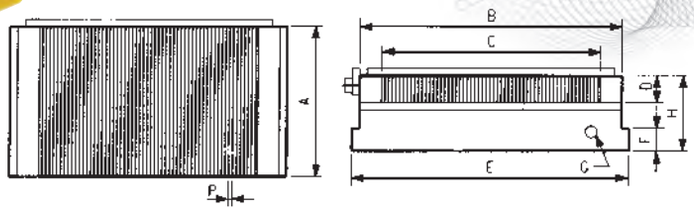
Unit:mm

ORDER NO.	DIMENSION	CHUCKING SIZE				POLE PITCH	CHUCK MOUNTING FACE			HEIGHT	HEXAGONAL HANDLE HOLE	WEIGHT KGS	CODE NO.
		A	B	C	D	P	A	E	F	H	G	N.W.	
VGF-1018B	100X175	100	175	146	18	5(1+4)	100	195	15	50	8	7.7	2015-160
VGF-1515B	150X150	150	150	116	18	5(1+4)	150	175	15	50	8	10	2015-161
VGF-1530B	150X300	150	300	256	18	5(1+4)	150	320	15	50	8	18.8	2015-162
VGF-1535B	150X350	150	350	306	18	5(1+4)	150	370	15	50	8	21.6	2015-163
VGF-1545B	150X450	150	450	406	18	5(1+4)	150	470	15	50	8	27.4	2015-164
VGF-2040B	200X400	200	400	356	18	5(1+4)	200	420	15	50	8	32.3	2015-165
VGF-2045B	200X450	200	450	406	18	5(1+4)	200	470	15	50	8	36.3	2015-166
VGF-1018BS	100X175	100	175	146	18	5(1+4)	100	175	15	50	8	8	2015-167
VGF-1515BS	150X150	150	150	121	18	5(1+4)	150	150	15	50	8	9	2015-168
VGF-1530BS	150X300	150	300	256	18	5(1+4)	150	300	15	50	8	20	2015-169

Fine Pole Magnetic Plate

MAGNETIC FORCE 21KGF
700 GAUSS





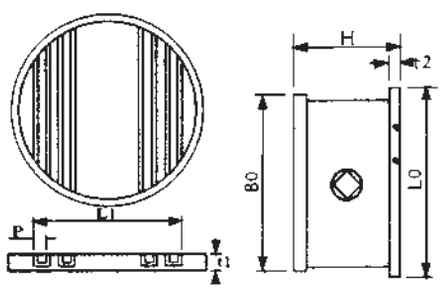
Unit:mm

ORDER NO.	SIZE	CHUCKING SIZE				POLE PITCH	CHUCK MOUNTING FACE			HEIGHT	WEIGHT KGS	CODE NO.
		A	B	C	D	P	A	E	F	H		
VRTW-1018A	100X175	100	175	146			100	195	15		7.7	2015-130
VRTW-1515A	150X150	150	150	116			150	170	15		9.8	2015-131
VRTW-1530A	150X300	150	300	256			150	320	15		18.7	2015-132
VRTW-1535A	150X350	150	350	306			150	370	15		21.4	2015-133
VRTW-1545A	150X450	150	450	406			150	470	15		27.4	2015-135
VRTW-2040A	200X400	200	400	356	18	2.5 (1+1.5)	200	420	15	50	32.5	2015-137
VRTW-2045A	200X450	200	450	406			200	470	15		36.4	2015-138
VRTW-1224A	300X600	306	600	556			300	620	15		73	2015-138A
VRTW-1018S	100X175	100	175	146			100	175	-		8	2015-139
VRTW-1515S	150X150	150	150	121			150	150	-		9	2015-140
VRTW-1530S	150X300	150	300	256			150	300	-		20	2015-141
VRTW-1325S	125X250	125	250	206	20		125	250	15		13.1	2015-142

FEATURES

- Thin and light weight to meet versatile applications.
- Fine-pitched magnetic poles on this micropitch model. Make it ideally suitable for small and thin works.
- Hexagonal wrench key is used for the magnetic ON/OFF change over handle.It is inserted through the side, easily removed and operates quite lightly.
- The chuck surface has a wider effective magnetic area than other chuck of similar type.

Round Type Magnetic Plate



Unit:mm

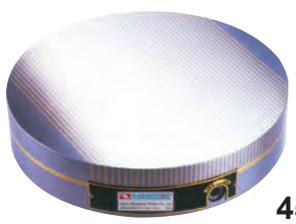
ORDER NO.	FACE PLATE			BOTTOM PLATE		POLE PITCH	HEIGHT	WEIGHT	CODE NO.
	B0	t1	L1	t2	L0	P	H	KGS	
VGD-06	150		101		200			9.8	2015-150
VGD-08	200		137		200			12.8	2015-151
VGD-10	250	21	191	18	250	9 (2+7)	78	20.2	2015-152
VGD-12	300		227		305			30.4	2015-153

ORDER NO.VGD TYPE
Magnetic field intensity:
Higher than 650 gauss

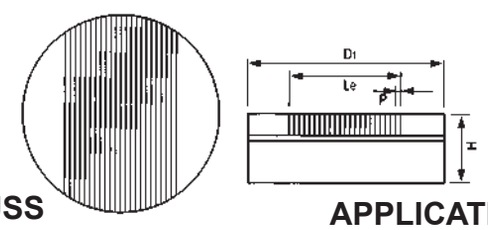
APPLICATION

Suitable for light cutting and grinding on lathe, grinder, EDM and the Rotary Table.

Fine Pole Round Type Magnetic Plate



450 GAUSS



Unit:mm

ORDER NO.	DIAMETER	TOP PLATE		POLE PITCH	HEIGHT	WEIGHT	CODE NO.
		D1	Le	P	H	KGS	
VGDW-6	160mm	160	115	2.5 (1+1.5)	50	8	2015-154
VDGW-8	200mm	200	155	2.5 (1+1.5)	50	13	2015-155
VGDW-10	250mm	250	205	2.5 (1+1.5)	50	21	2015-156
VGDW-12	300mm	300	255	2.5 (1+1.5)	50	33.5	2015-157

APPLICATION

New type of thin chuck, in 50mm thickness, for grinding and electrod-discharging works, for thin plate or small works, in wide range of applications, it features a wide effective magnetic area on the face plate (chucking face).

Permanent-Electro Magnetic Chuck

Suitable for Milling

NEW

5 SIDES MACHINING

CONTROLLER INCLUDED

VSB-
SPRING BLOCK

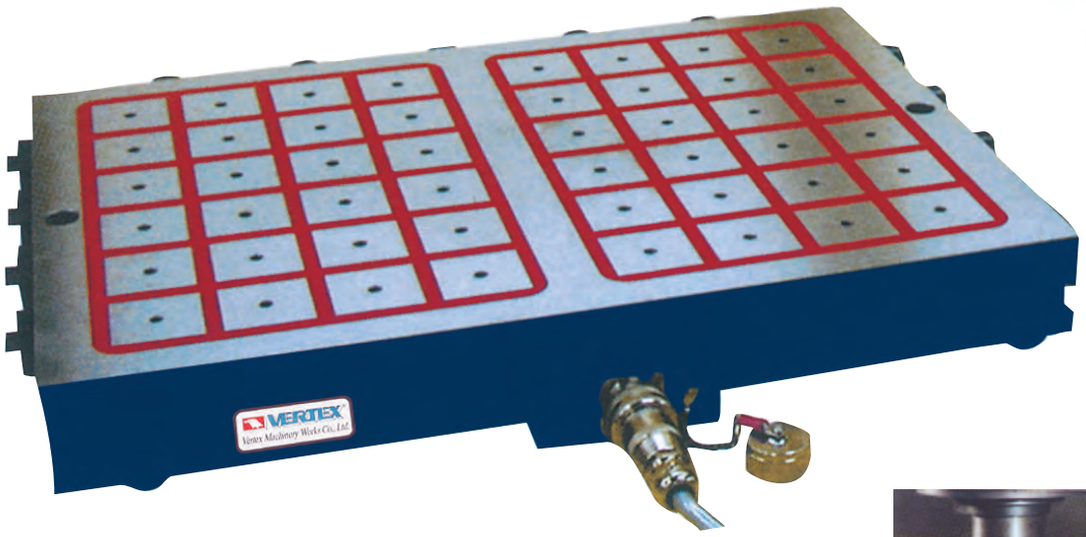
VTJ-
MAGNETIC TRANSISTING SOFT JAW

FEATURES

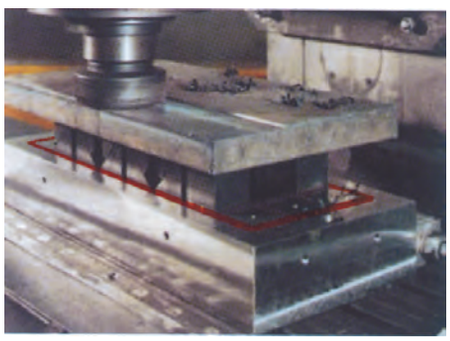
- Ensure higher magnetic and mechanical performances, as well as absolute reliablity.
- Owing to no power supply to keep the magnetic chuck ON, it could be used for long time and never get temperature to affect the accuracy of workpiece. “COLD” device, not subject to inetrnal wear or deformation resulting from moving internal parts.
- Easy and convenient to clamp a workpiece, shortens clamping time.
- Most suitable for heavy duty machining on medium, large or even rough components.
- Easily integrated with Pallet Change of Horizontal Machining Center and FMS System the Magnetic Chucks will be as geomertrically stable as the table itself.
- For the most powerful machine tools available. Systems are switched ON or OFF with simple electrical pulse. A variable output from 20%-100% is controlled from the operator push button unit.
- Entirely independent of external power supply when holding work pieces. There is no risk, when power fails.
- 2 seconds control for power ON & OFF. No electric Power Supply required to keep the magnetic chuck ON. Safety in case of power failure.
- 10mm MIN. Thin workpiece & MIN. 4 block magnetic pole for workpiece.

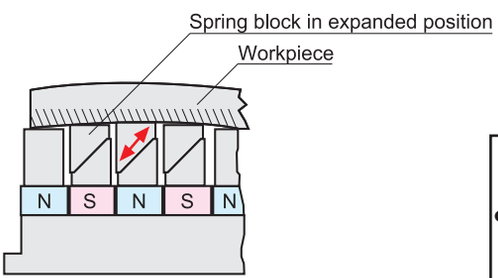
Permanent-Electro Magnetic Chuck

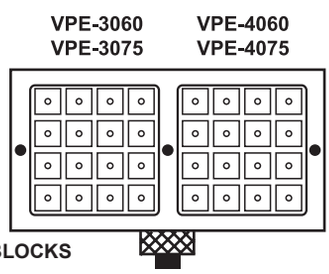
Suitable for Milling

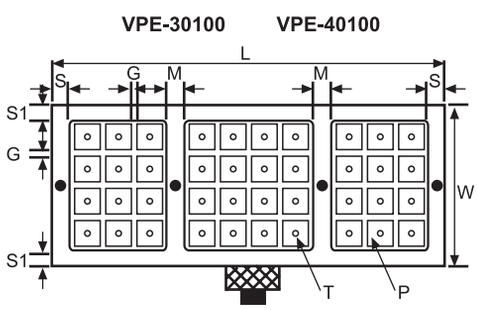


STRONG CLAMPING FORCE, FAST SETTING, HIGH SAFETY









MAGNETIC FORCE 1000 KGS / 100 CM² / 4 SQUARE BLOCKS

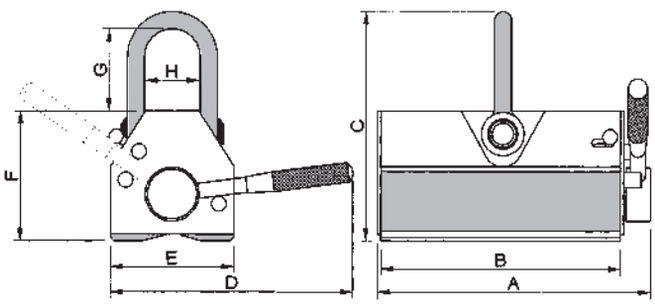
ORDER NO.	DIMENSION							PITCH	POLE	No. of POLE	VOLTAGE	AMP	CHUCK N.W	CONTROLLER N.W	CODE NO.
	W	L	S	S1	M	T	HIGHT								
VPE-2540	240	430			--					18		18	42		2033-030
VPE-2560	240	590			30					24		24	63		2033-031
VPE-2580	240	750			30					30		30	84		2033-032
VPE-25100	240	990			30					42		40	105		2033-033
VPE-3030	300	310			--					16		16	38		2033-048
VPE-3040	300	430			--					24		24	51	10	2033-049
VPE-3060	300	590			30					32		35	76		2033-050
VPE-3075	300	750			30					40		32	102		2033-051
VPE-3090	300	870	30	25	30	M8	70	10	50X50	48	AC-220V 380V	40	115		2033-051A
VPE-30100	300	990			30					56		35	127		2033-052
VPE-4040	420	430			--					36		18	68		2033-052A
VPE-4060	420	590			30					48		25	102		2033-053
VPE-4075	420	750			30					60		30	135		2033-054
VPE-40100	420	990			30					84		45	168		2033-055
VPE-5060	480	590			30					56		28	126	15	2033-060
VPE-5080	480	750			30					70		35	168		2033-061
VPE-50100	480	990			30					98		50	210		2033-062

Permanent Magnetic Lifter (ON/OFF Type)

Convenient and efficiency for makes more profit

Light weight
Less dimension
Lower price

Safety coefficient 3.5 times!



FEATURES

- Each size suit for plate type & round type steel using.
- All new models with " light weight" less dimension" and " lower price".
- Made by permanent magnet, require no power supply, thus eliminating hazards due to failure wiring system as electric type.
- It features powerful magnetic force, with 3.5 times safety coefficient makes more safety in use.

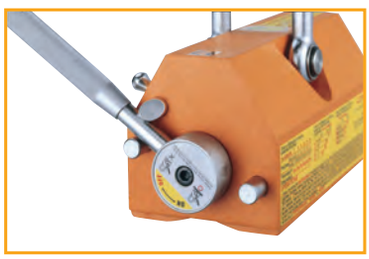
OPERATION

With ON/OFF switch, it is very easy and convenient to operate.
See as the example pictures as below

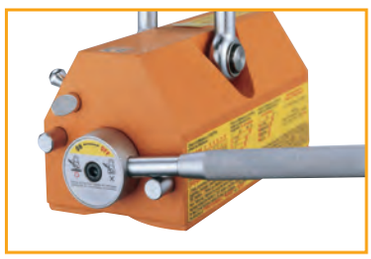
Notice:

Never moves the handle to "ON" side, except on an iron object of holding.

ON



OFF



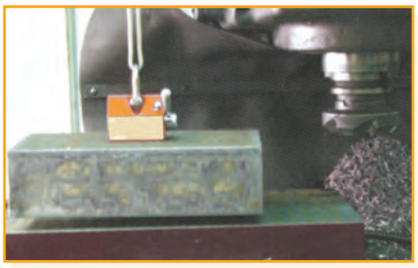
DIMENSIONS

ORDER NO.	Capacity	A	B	C	D	E	F	G	H	Weight	SAFETY COEFFICIENT	CODE NO.
	kg lbs	mm inch	mm inch	mm inch	mm inch	mm inch	mm inch	mm inch	mm inch	kg lbs		
VML-100	100 220	107 4.2	84 3.3	120 4.7	125 4.9	60 2.4	71 2.8	41 1.6	30 1.2	2.7 5.5	x3.5 times	2018-060
VML-300	300 660	180 7.1	155 6.1	156 6.1	185 7.3	90 3.6	93 3.7	51 2.0	41 1.6	9.1 18.9		2018-061
VML-600	600 1320	255 10	224 8.8	212 8.3	260 10.2	115 4.5	120 4.7	77 3.0	52 2.0	21.5 46		2018-062
VML-1000	1000 2200	280 11	245 9.6	286 11.3	371 14.6	165 6.5	169 6.7	97 3.8	87 3.4	53.4 101		2018-063
VML-2000	2000 4400	422 16.6	380 15	348 13.7	512 20.2	216 8.5	215 8.5	105 4.1	121 4.8	127.8 259		2018-064

Permanent Magnetic Lifter (ON/OFF Type)

APPLICATIONS

- Suitable for move plate steel, block steel and round steel, such as machine parts,press molds, plastic molds and iron material .....etc.



LOAD OF HOLDING POWER

- The load of holding power will changes depending on the thickness, attractive face roughness and quality of material and clearance between the workpiece with magnet.

Table of difference in holding power by thickness

	Thickness		Percentage of lifting capacity					
	mm	inch	VML-3000	VML-2000	VML-1000	VML-600	VML-300	VML-100
T1	up 60	up 2.36″	100%	100%	100%	100%	100%	100%
T2	55	2.16″	95%					
T3	50	1.97″	90%	95%				
T4	45	1.77″	85%	90%				
T5	40	1.57″	80%	85%				
T6	35	1.38″	70%	75%	90%			
T7	30	1.18″	60%	65%	80%			
T8	25	0.98″	50%	55%	70%	90%		
T9	20	0.79″	40%	45%	60%	75%	90%	
T10	15	0.59″	30%	35%	50%	60%	70%	
T11	10	0.39″	20%	25%	35%	45%	50%	70%
T12	5	0.20″	10%	15%	20%	25%	30%	40%

Table of difference in holding power by attractive face roughness For all models

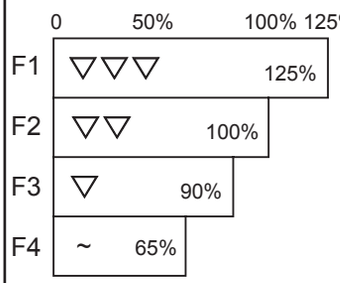
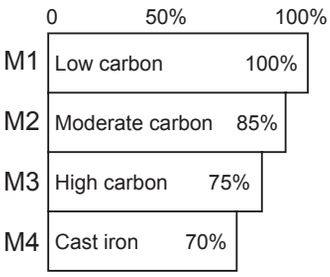


Table of difference in holding power by material quality For all models



Calculating Formula for "Range of Lifting Capacity" → (TxFxMxCapacity of Lifter)

Example:
Terms of workpiece: T8, F1 and M2
90% x 125% x 85% x 600kgs (VML-600)=573kgs

SAFETY COEFFICIENT x 3.5 times

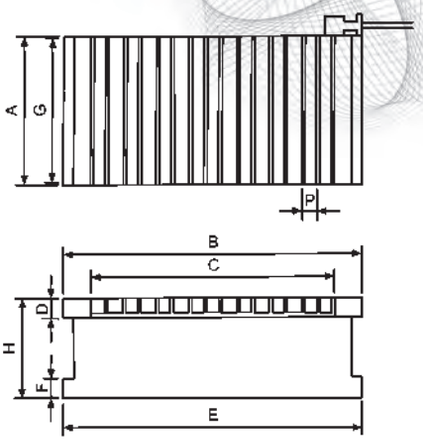
The capacity of magnet indicated as 1/3.5 of holding power, it means the real holding power is 3.3 times of capacity. For example the capacity of VML-600 is 600kgs (1320lbs) but the real holding power is 1980kgs (4350lbs).
The large safety coefficient is consideration for ensuring the use in safety.

MAXIMUM LIFTING RANGE

FORM OF MATERIAL	STEEL PLATE		ROUND STEEL		
ORDER NO.	Max.lifting capacity	Min.thickness required	Max.lifting capacity	Max.diameter	Maximum length
	kg lbs	mm inch	kg lbs	mm inch	mm inch
VML-100	100 220	15 0.59″	45 99	150 5.9″	1000 40″
VML-300	300 660	25 0.98″	135 300	250 9.8″	1500 60″
VML-600	600 1320	30 1.18″	270 600	350 13.8″	2000 80″
VML-1000	1000 2200	40 1.57″	450 990	450 17.8″	2500 98″
VML-2000	2000 4400	55 2.16″	900 1980	550 21.6″	3000 118″
VML-3000	3000 6600	60 2.36″	1350 2970	650 25.6″	3500 138″

Standard Pole Electro Magnetic Chuck

450 GAUSS



APPLICATION

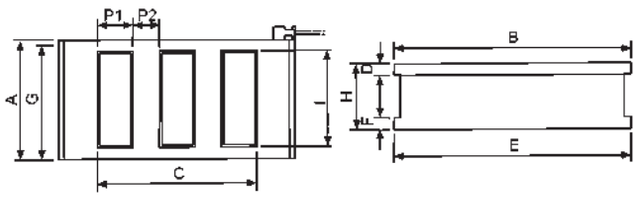
Most suitable for grinding operation,
of standard electromagnetic chuck.

Unit:mm

ORDER NO.	DIMENSION	CHUCKING SIZE				POLE PITCH	CHUCK MOUNTING FACE				VOLTAGE	CURRENT	WEIGHT (kg)	CODE NO.
		A	B	C	D	P	G	E	F	H				
VEM-1530A	150x300	150	300	228	20	15(3+12)	144	316	20	70	DC-90V	0.15A	21	2015-221
VEM-1535A	150x350	150	350	288	20	15(3+12)	144	366	20	70	DC-90V	0.18A	25	2015-222
VEM-1545A	150x450	150	450	378	20	15(3+12)	144	466	20	70	DC-90V	0.24A	32	2015-223
VEM-2040A	200x400	200	400	348	20	15(3+12)	194	416	20	70	DC-90V	0.47A	38	2015-224
VEM-2045A	200x450	200	450	378	20	15(3+12)	194	466	20	70	DC-90V	0.35A	43	2015-225
VEM-2550A	250x500	250	500	438	20	15(3+12)	240	500	20	70	DC-90V	0.73A	67	2015-226
VEM-3060A	300x600	300	600	529	20	15(3+12)	290	600	20	70	DC-90V	0.97A	97	2015-227
VEM-4080A	400x800	400	800	725	25	19(3+16)	390	800	20	80	DC-90V	1.56A	182	2015-228
VEM-40100A	400x1000	400	1000	936	25	19(3+16)	390	1000	20	80	DC-90V	1.60A	228	2015-229
VEM-50100A	500x1000	500	1000	936	25	19(3+16)	490	1000	20	80	DC-90V	1.72A	285	2015-230

Super-Powerful Electric Magnetic Chuck

MILLING M / C TYPE
1200 GAUSS



APPLICATION

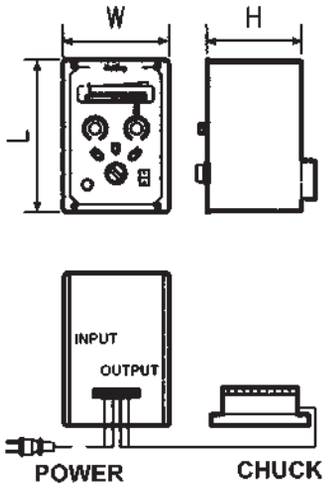
Most efficient for heavy cutting with milling machine, shaper, planer and planomiller. It displays the power for the thick work and the high speed cutting operation.

Unit:mm

ORDER NO.	DIMENSION	CHUCKING SIZE					POLE PITCH		CHUCK MOUNTING FACE				VOLTAGE	CURRENT	WEIGHT N.W. (kg)	CODE NO.
		A	B	C	D	I	P1	P2	G	E	F	H				
VEM-2040Z	200x400	200	400	332	20	160	40	35	194	400	20	110	DC-90V	0.71	54	2015-251
VEM-2050Z	200x500	200	500	422	20	160	48	34	194	500	20	110	DC-90V	0.91	75	2015-252
VEM-2060Z	200x600	200	600	520	20	160	48	30	194	600	20	110	DC-90V	1.00	80	2015-253
VEM-2550Z	250x500	250	500	422	20	200	42	34	240	500	20	120	DC-90V	1.16	90	2015-254
VEM-3060Z	300x600	300	600	520	20	240	48	30	290	600	20	120	DC-90V	1.63	130	2015-255
VEM-4080Z	400x800	400	800	718	25	340	48	30	390	800	20	120	DC-90V	2.53	230	2015-256
VEM-40100Z	400x1000	400	1000	917	25	340	45	35	390	1000	20	120	DC-90V	2.96	288	2015-257
VEM-50100Z	500x1000	500	1000	917	25	430	45	35	490	1000	20	120	DC-90V	3.96	360	2015-258
VEM-60100Z	600x1000	600	1000	917	25	530	45	35	590	1000	20	120	DC-90V	5.30	432	2015-259

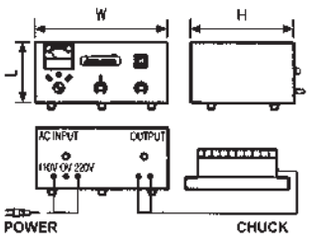
Chuck Controller (For Rectify & Demagnetize)

ORDER NO.VCC-705(5A)
For VGI-618~2048 / VLZ-510~612 / VIW-612~1224 / VEM-1530A~50100A



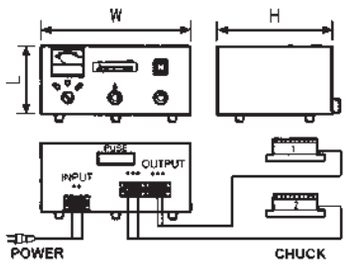
FEATURES
- Suitable for standard type of electric magnetic chucks.
- With current capacity of 5A; demagnetizing time is 6-15 seconds.
- Precisely adjust the magnetic force of electric magnetic chucks and indicate LED voltage.
- Suitable for any kind of electric magnetic chucks.

ORDER NO. VCC-805A (10A) FOR VGI-2060 / VEA-816~1640 / VEM-2040Z~40100Z
VCC-815 (15A) FOR VEA-2040~VEA2460 / VLZ-2060 / VEM-50100A / VEM-50100Z



FEATURES
- Suitable for standard type of electric magnetic chucks.
- With current capacity of 10A and 15A; demagnetizing time is 6-15 seconds.
- Precisely adjust the magnetic force of electric magnetic chucks and indicate LED voltage and current.
- Suitable for any kind of electric magnetic chucks.

ORDER NO. VCC-820 (20A) FOR VEA-2460~ / VEM-60100Z



FEATURES
- Suitable for super powerful type of big electric magnetic chucks and could control 2 chucks at the same time.
- With current capacity of 20A; demagetizing time is 8-15 seconds.
- Precisely adjust the magnetic force of electric magnetic chucks and indicate LED voltage and current.
- Built-in fan for radiating heat.
- Suitable for any kind of electric magnetic chucks.

Unit:mm

ORDER NO.	INPUT VOLTAGE (SINGLE PHASE)	OUTPUT		DIMENSION			NET WEIGHT (KGS)	CODE NO.
		VOLTAGE	CURRENT	L	W	H		
VCC-705	AC 110V/220V	DC 0-100V	5A	200	137	122	3.5	2015-380
VCC-805A	AC 110/220/380/415/440V	DC 0-100V	10A	150	330	260	18	2015-381
VCC-815	AC 220/380/415/440V	DC 0-120V	15A	150	330	260	20	2015-382
VCC-820	AC 220/380/415/440V	DC 0-120V	20A	180	385	295	32	2015-383

Magnetic Lifter

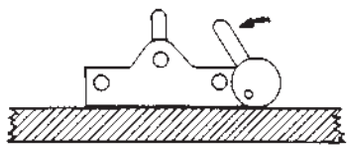
CAM TYPE

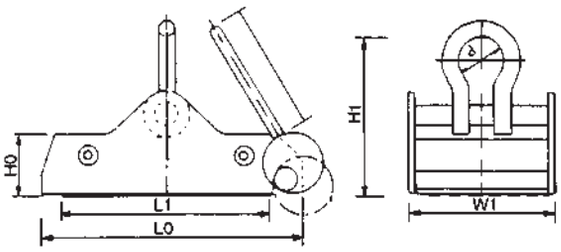
FEATURES

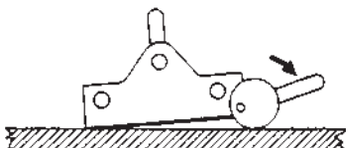
- Normal operation is not influenced on power off or system breakdown, as there is permanent magnet.
- Cam mechanism, easy operation.
- Ground surface of workpiece may be attracted to be scrap occasionally, please be careful.

LOADING

- Take the magnetic table on the workpiece, and move it at the vertical position.







UNLOADING

- Move th level at the horizontal position, the workpiece will be separated.

ORDER NO.	CAPACITY	W1	L1	L0	H0	H1	d	l	NET WEIGHT (KGS)	CODE NO.
VGP-100	1000kg	204	298	366	65	125	50	135	25.8	2018-040
VGP-200	2000kg	330	380	445		130			46.8	2018-041

Magnetic Lifter

HANDLE TYPE

VML-80

VML-140

FEATURES

- Work is held and released very smoothly.
- Most suitable to move materails or semi-finished products such as black steel plate, flat iron and other materials etc.

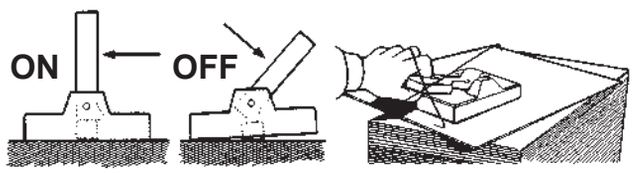
HOLDING POWER

It depends on the attractive face, quality and thickness of material and clearance between the material and magnet.

MAXIMUM HOLDING POWER

Workpiece must be thick enough and the surface must be free of dust. magnetic attraction is best and with low carbon-soft steels.

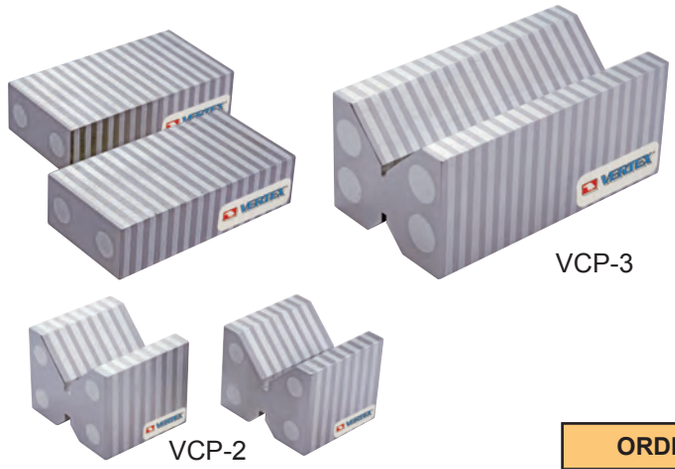
VML-150



Unit:mm

ORDER NO.	CAPACITY	L	W	H	N.W (KGS)	CODE NO.
VML-80	80kgf	55.5	50	62	1.23	2018-054
VML-140	140kgf	120	50	55	2.2	2018-055
VML-150	150kgf	140	100	140	2.5	2018-056

Magnetic Transisting Block



VCP-1 Chuck Parallels
1″x2″x4″ Matched pair.
VCP-2 Chuck Blocks $2^{3}/_{8}$″
$1^{7}/_{8}$″x$2^{3}/_{8}$″x2″ Matched pair.
VCP-3 Chuck Block
$1^{4}/_{5}$″x$2^{3}/_{10}$″x$4^{3}/_{10}$″single
VCP-4 Chuck Block
Each one of VCP-1 & VCP-2

- The V-Blocks and Parallels transfer the magnetism from permanent magnetic chucks.
  The steel used in all V-Blocks and Parallels is selected for the hightest magnetic transfer and is cast integrally with aluminum.

ORDER NO.	WEIGHT KGS	CODE NO.
VCP-1	1.3	2015-401
VCP-2	1.2	2015-402
VCP-3	1.4	2015-403
VCP-4	2.5	2015-404

Magnetic Transisting Block Set

ORDER NO.VCP-6 CODE NO.2015-410

WEIGHT:4.2kgs

Non-magnetic laminated plates and blocks are extras to increase the versatility of chucks. These plates and blocks offer excellent guidance of the magnetic force, and can be used in combination with chucks as ‘extensions’ for the clamping of workpieces of complex shapes.

BOXED SET

Comprises a selected set of 4 pairs of blocks

NO. of Blocks	STYLE	LxHxWxPCS	USED MODEL
1Pair		60x35x15x2	VCP-0
2Pair		100x50x25x2	VCP-1
1Pair		48x60x50x2	VCP-2

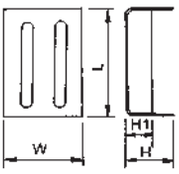
Magnetic Adjustable Link

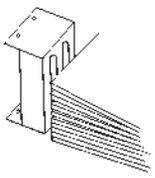
ORDER NO.VCP-5 CODE NO.2015-420

WEIGHT:0.8kg

- Each block 2″x1″x1″.Length overall: $4^{1}/_{8}$″. width over all $2^{1}/_{8}$″.
- For Holding and welding.
- Magnetic blocks can be set at any angle by adjustment and locking of the wing nut. When used in multiples, a number of sheets can be held in complicated arrangement.
- Compact in size for holding work in confined spaces.

Magnetic Steel Sheet Separator





APPLICATION

- Suitable for separating a pile of thin iron plates or for chips separation.

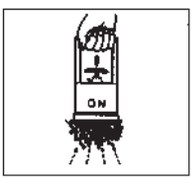
FEATURES

- By the principle of mutual repulsion between same magnetic poles, this item enable easy separation of thin iron plates.
- Also useable for chips separation on the small conveyer bilt.

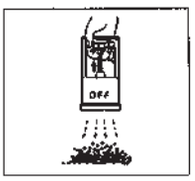
Unit:mm

ORDER NO.	DIMENSION				NET WEIGHT KGS	CODE NO.
	L	W	H	H1		
VCP-10	130	130	65	35	2.6	2015-430
VCP-11	210	155	65	35	4.2	2015-431

Magnetic Chip Collecter



Magnet tumed ON attracts Powerfully.



Magnet turned OFF Releases by Plling Up Lever.

ORDER NO.	Dimension	Mass kgs	Weight kgs	CODE NO.
VCP-15	ø112x178H	75	1.9	2015-440

APPLICATION

- You can use it in a wide range of fields for machining, casting food chemical processing, etc.
- Most suitable for collecting iron pieces scattered on the floor or mixed in the medium, for putting in order, and holding the work at the buffing and other types of operations. This is conveniently applied to uses in selecting and collecting iron powder and granule materials; even for house-hold and educational uses.

FEATURES

- Magnetic force is turned ON/OFF just by operating the level lightly with a hand.
- Powerful magnet ensure very strong adsorptive force with wide attractive face.

Magnetic Separating Bar Unit

VMS-9B

VMS-7B

Magnetic Separating Bar Unit made with Powerful magnet. it is essential to Increase operation efficiency in removing on substances from powder and grain Materials, as in the industries of chemical, various and plastic...etc.
A wide range of applications and easy to mount.

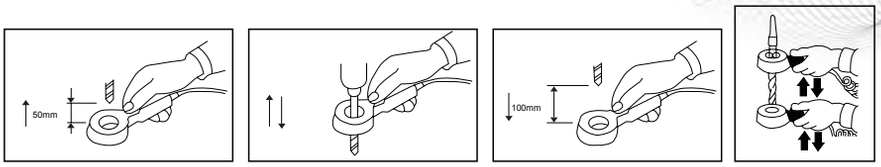
TEMPERATURE LIMIT 60ºC

Unit:mm

ORDER NO.	DIMENSION (LxHxW)	WEIGHT KGS	CODE NO.
VMS-7B	180x170x75	2.4	2015-450
VMS-9B	239x220x65	3.8	2015-451

Demagnetizer

- Suit for drill, end mill, hard ware, cutting tool...etc.
- Handy type, it can also use the cutting tool.

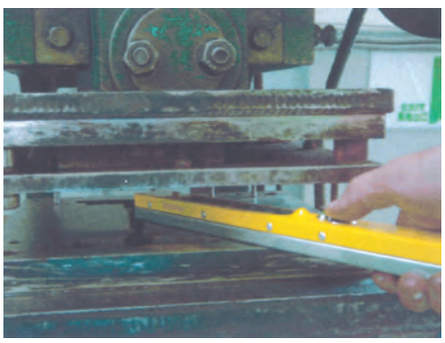


ORDER NO.	INPUT VOLTAG	POWER	DUTY CYCLE	HOLE CAPACITY	WEIGHT KGS	CODE NO.
VDM-40	AC110V/220V	80W	20%	Ø40MM	1.3	2019-030

NEW

HANDY TYPE
FOR BIGGER OR HEAVY WORKPIECE

- Suit for molding.
- Work perfectly in the narrow place.
- No need to remove the workpiece.



ORDER NO.	INPUT VOLTAGE (SINGLE PHASE)	CURRENT	USING TIME	DIMENSION			WEIGHT KGS	CODE NO.
				L	W	H		
VDM-50	110V/220V/19H	1.2A	Demagnetize 1 minute waiting 4 minute	345	35	25	1.2	2019-031

Demagnetizer

FEATURES

- Suitable for general component spare parts, attachments, tools, etc, forfixed way demagnetization.
- Suitable for longtime use; be able to use continuously for 24 hours.
- With the design of double coils inside to avoid heat release.

DELUXE TYPE

Unit:mm

ORDER NO.	INPUT VOLTAGE	CAPACITY	DUTY CYCLE	DIMENSION			NW KGS	CODE NO.
				L	W	H		
VDM-68	110V 220V	AC-330VA	100%	150	200	100	7.4	2019-001

Demagnetizer

FEATURES

- Input voltage 110-220 Volts AC.
- With On-Off switch.
- Quickly Demagnetizes tools, drills punches, dies,etc. Held by magnetic chucks. Parts are demagnetized by drawing across surface.
- Voltage 200-240 should be ordered.

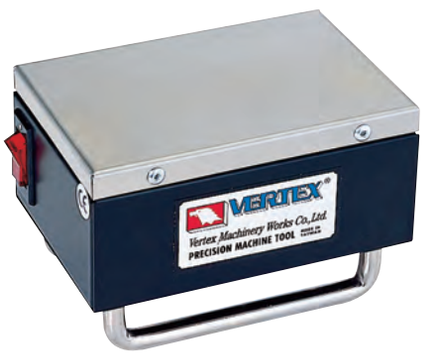
Unit:mm

ORDER NO.	INPUT VOLTAGE	CAPACITY	WORKING SURFACE	HEIGHT	WEIGHT (KGS)	DUTY CYCLE	CODE NO.
VDM-8	AC- 110V 220V	210VA	160X110	100	4.5	50%	2019-011
VDM-11	AC- 110V 220V	550VA	200X280	30	16	100%	2019-021

VDM-8, 11

Mini Type Demagnetizer

For Handy And Big Plate



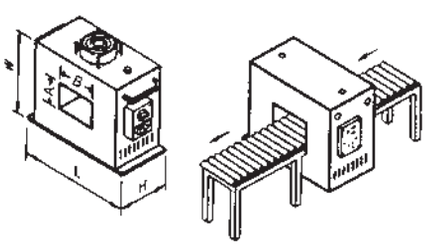
Unit:mm

ORDER NO.	INPUT VOLTAGE	CAPACITY	WORKING SURFACE	HEIGHT	WEIGHT (KGS)	DUTY CYCLE	CODE NO.
VDM-9	AC-110V 220V	110VA	123X83	83	1.8	90%	2019-020

Tunnel Type Demagnetizer And Magnetizer

FEATURES

- Merely using tools to pass through or move into a tunnel will cause a good demagnetizing effect.
- Suitable for planned automatic process; be adapted for delivery belts to proceed in order to increase productivity.
- Suitable for hand manual tools, etc. for filling magnetism.
- Suitable for large production of component spare parts, attachments, tools...etc.
- Suitable for longtime use; be able to use continuously for 24 hours.
- Super efficacy in demagnetizing and magnetizing; suitable for many kinds of metals.
- Attached a fan inside for dissipating heat.



ORDER NO.	POWER SOURCE	CAPACITY	DIMENSION			THROUGH HOLE		NET WEIGHT KGS	DUTY CYCLE	CODE NO.
			L	W	H	A	B			
VDM-150	AC 220/380V (single phase)	3520AV	370	370	200	100	150	33	100%	2019-025
VDM-250		4840AV	470	370	200	150	250	52		2019-026
VDM-450	AC 220/380V (3 phase)	4400VA	700	500	200	250	450	80		2019-027

Chip Collector Mini Handy Type

NEW

- Pull the trigger to drop attracted items easily.
- Permanent magnet.
- Light and handy design fitting ergonomics.
- Easy to pick up various kinds of hand of hand tools and small iron or steel parts for office, house and factory.
- Impact-proof plastic materials.

Unit:mm

ORDER NO.	PACKING	MASS KGS	CUFT	DIMENSION			WEIGHT KGS	CODE NO.
				L	W	H		
VCC-16	Color BOX	4.9	0.09′	110	110	190	0.7	2019-040

Chip Collector With Adjustable Arm Type

NEW

- Work perfectly in the narrow space.
- Pick up ferrous metal items such as tools, bolt, paper clips, nails, etc.
- Deluxe handle for comfort.
- Easy to use, safe, practical and time saving.
- Permanent magnet.
- Weight : 2 kgs

ORDER NO.	MAGNETIC BASE	MASS	CUFT	TOTAL LENGTH	CODE NO.
VCC-17A	120x70m/m	50kg	0.4′	700m/m	2019-041A

Chip Collector With Wheels

NEW

- Easy to use, safe and practical time saving device.
- Release magnetic pick up tool has a magnetic device which enable to attract any metal items and spare parts laying on the floor without the trouble to pick them up one by one.
- Pull the trigger to release magnetic force.
- Permanent magnet.

ORDER NO.	PACKING	MASS	CUFT	LENGTH	WEIGHT KGS	TOTAL WIDTH	CODE NO.
VCC-19	In Bulk	8.9kg	1.15′	720~1035m/m	1.5	377m/m	2019-043

Chip Collector With Flexible Arm

Flexible Magnetic Pick-Up Tool

WEIGHT:0.4kg

NEW

ORDER NO.	VCC-20
PACKING	Tied On Card
MASS	5kgs
CUFT	0.04′
LENGTH	533m/m
CAPACITY	12 lbs
CODE NO.	2019-044

Chip Collector With LED

Lighted Flexible Magnetic Pick-Up Tool

WEIGHT:0.2kg

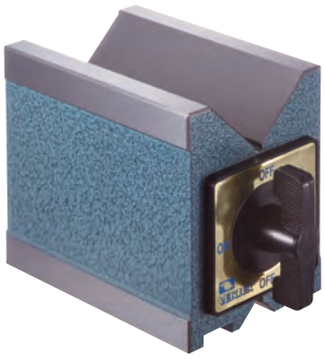
NEW

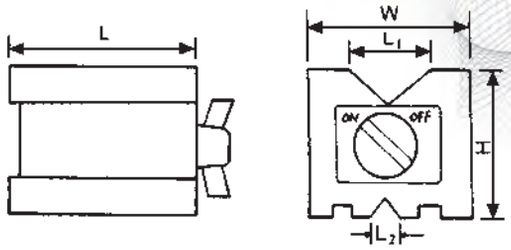
ORDER NO.	VCC-21
PACKING	Tied On Card
MASS	0.5kg
CUFT	0.04′
LENGTH	533m/m
CAPACITY	0.7 lbs
CODE NO.	2019-045

With 2pc 1.5V batteries

Magnetic V Block

1 PCS



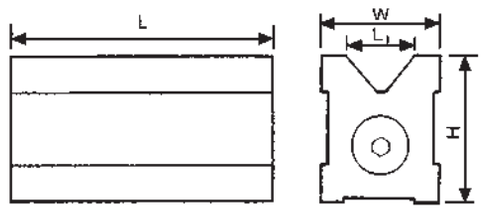


ORDER NO.	Magnetic Power(pull)	Dimension					Wt. kgs	CODE NO.
		H	W	L	L1	L2		
VCP-25	70kgs	95.3 3.75″	70 2.76″	101.6 4″	50 1.97″	20 0.75″	3.9	2015-501

Magnetic V Block

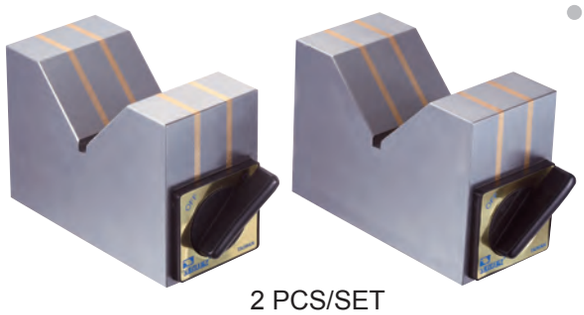
1 PCS

VCP-26　　VCP-27



ORDER NO.	Magnetic Power(pull)	Dimension				Wt. kgs	CODE NO.
		H	W	L	L1		
VCP-26	30kgs	73 2.87″	54 2.13″	70 2.76″	38 1.5″	1.8	2015-510
VCP-27	35kgs	73 2.87″	60 2.36″	125 4.29″	38 1.5″	3.3	2015-511

Magnetic V Block



2 PCS/SET
PAIR

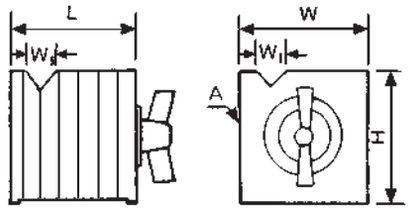
Magnetic V-Block

- Two pieces finished to the same dimension and accuracy are used together as a set.

ORDER NO.	Magnetic Power(pull)	Dimension			Width of V	Wt. kgs	CODE NO.
		H	W	L			
VCP-29	17kgs	74 2.91″	45 1.77″	110 4.33″	60 2.36″	4.9	2015-521
VCP-30	23kgs	100 3.94″	50 1.97″	150 5.91″	90 3.54″	8.9	2015-522

Magnetic Square Block

- The V-Blocks and Parallels transfer the magnetism from permanent magnetic chucks.
  The steel used in all V-Blocks and Parallels is selected for the hightest magnetic transfer and is cast integrally with aluminum.



ORDER NO.	Mag Power of V groove	Mag. Power of base	H	W	L	W1	Wt. kgs	CODE NO.
VCP-31	25kgs	50kgs	100 3.94″	100 3.94″	100 3.94″	26 1.02″	6.5	2015-530
VCP-32	50kgs	140kgs	150 5.91″	150 5.91″	150 5.91″	32 1.26″	20.4	2015-531

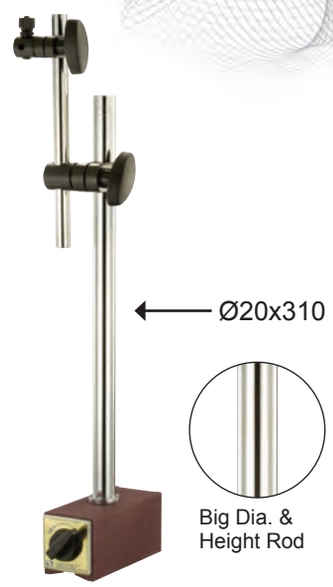
Magnetic Tools FOR DIAL GAUGE, INDICATORS

FIXED ARM TYPE VMB-B,01,02
THE DIAL CLAMP HOLE Ø6.5 & Ø8

ORDER NO. VMB-B
MAGNETIC BASE /80kgs

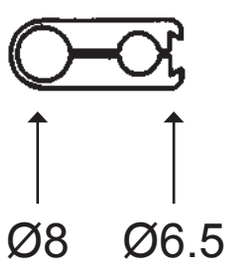
ORDER NO. VMB-01
MAGNETIC BASE
(ADJUSTABLE TYPE) /80kgs

ORDER NO. VMB-02
MAGNETIC BASE
(ADJUSTABLE TYPE) /80kgs



ORDER NO. VMB-03
MAGNETIC BASE
HEIGHT ROD TYPE/130kgs

ORDER NO.	BASE SIZE LXWXH(MM)	HOLDING POWER	MIN ROD O.D XL	SUB ROD OD XL	WEIGHT (KGS)	CODE NO.
VMB-B	62X50X55	80KGS	Ø12X173	Ø10X162	1.6	2015-601
VMB-01	62X50X55	80KGS	Ø12X176	Ø10X150	1.6	2015-602
VMB-02	62X50X55	80KGS	Ø12X171	Ø10X153	1.6	2015-603
VMB-70	73.5X50X55.5	100KGS	Ø25X198	Ø25X116	1.7	2015-604
VMB-106	73.5X50X55.5	100KGS	Ø25X125	Ø25X125	1.9	2015-605
VMB-106H	75X50X55	100KGS	Ø25X125	Ø25X125	2.2	2015-606
VMB-03	115X50X55	130KGS	Ø20X310	Ø14X200	3.9	2015-607



UNIVERSAL ARM TYPE VMB-70,106,106H
THE DIAL CLAMP HOLE Ø6.5, Ø8 & DOVETAIL

ORDER NO. VMB-70
DELUXE UNIVERSAL
MAGNETIC BASE /100kgs

ORDER NO. VMB-106
MECHANICAL ARM
MAGNETIC BASE /100kgs

ORDER NO. VMB-106H
HYDRAULIC ARM
MAGNETIC BASE /100kgs

Magnetic Tools

The head also suit for dial indicators

ORDER NO. VMB-06
FLEXIBLE ARM
WITH MAGNETEC BASE

ORDER NO. VML-A
MAGNETIC BASE AND
WORKING BEAM

ORDER NO. VML-B
MAGNETIC
WORKING BEAM

ORDER NO. VML-C
MAGNETIC
WORKING BEAM

ORDER NO.	BASE SIZE LXWXH(MM)	HOLDING POWER	MAIN ROD O.DXL	WEIGHT (KGS)	CODE NO.
VMB-06	62X50X55.5	75KGS		1.6	**2015-610**
VML-A	62X50X55.5	75KGS	Ø20X200	1.5	**2015-611**
VML-B	62X50X55	75KGS	Ø26X200	1.5	**2015-612**
VMB-00	62X50X55.5	80KGS		1.1	**2015-613**
VMB-11	120X50X55	140KGS		2.1	**2015-614**
VMB-12	60X50X55	80KGS		1.1	**2015-615**
VML-C	60X50X55	80KGS	Ø20X460	2.2	**2015-616**
VML-M	60X50X55	80KGS	Ø15X325	1.7	**2015-617**

ORDER NO. VML-M
MAGNETIC BASE WITH
MAGNIFYING GLASS
M8X1.25p,80kgs

ORDER NO. VMB-00
MAGNETIC BASE ONLY
M8X1.25p,80kgs

ORDER NO. VMB-11
MAGNETIC BASE ONLY
M8X1.25p,140kgs

ORDER NO. VMB-12
WHEEL DRESSER
CLAMP HOLE 12MM
WITHOUT DIAMOND
DRESSER PEN

Magnetic Tools

ORDER NO. VMF-112
MINI MAGNETIC BASE

ORDER NO. VH-70
MINI MAGNETIC BASE

ORDER NO. VMF-102
MINI DELUXE UNIVERSAL
MAGNETIC BASE
SUITABLE FOR EDM USING.

ORDER NO. VMS-1/4
ORDER NO. VMS-3/8
STEEL HOSE WITH
NOZZLE

ORDER NO.	BASE SIZE LXWXH(MM)	HOLDING POWER	MAIN ROD O.D X L	SUB ROD O.D X L	WEIGHT (KGS)	CODE NO.
VMF-112	30X30X30	17KGS	Ø20 X 70	Ø20 X 65	0.6	2015-619
VH-70	31X31X32	15KGS	Ø10 X 70	Ø6 X 90	0.4	2015-620
VMF-102	44X50X38	22KGS	Ø20 X 70	Ø20 X 65	0.6	2015-621
VMS-1/4			Ø11 X 370	HOSE THREAD 1/4	0.2	2015-640
VMS-3/8			Ø15 X 370	HOSE THREAD 3/8	0.4	2015-641
VMH-54	62X50X55.5	75KGS	Ø16 X 330	2PCS.HOSE	1.4	2015-622
VMH-62	62X50X55.5	75KGS	Ø16 X 330	3PCS.HOSE	1.5	2015-623
VMH-63	62X50X55.5	75KGS	Ø11 X 330	1PCS.HOSE	1.6	2015-642
VMH-64	62X50X55.5	75KGS	Ø11 X 330	2PCS.HOSE	2	2015-643
VMH-65	62X50X55.5	75KGS	Ø11 X 330	3PCS.HOSE	2.2	2015-644

ORDER NO. VMH-54
(2 HOSE)
MAGNETIC BASE
WITH HOSE NOZZLE

ORDER NO. VMH-62
(3 HOSE)
MAGNETIC BASE
WITH HOSE NOZZLE

ORDER NO. VMH-63
(1 HOSE)
MAGNETIC BASE
WITH STEEL NOZZLE

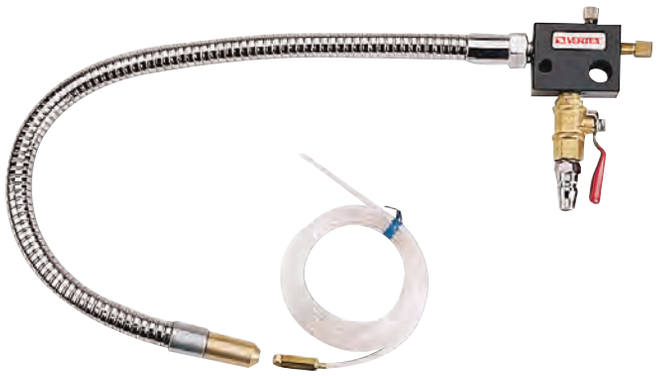
ORDER NO. VMH-64
(2 HOSE)
MAGNETIC BASE
WITH STEEL NOZZLE

ORDER NO. VMH-65
(3 HOSE)
MAGNETIC BASE
WITH STEEL NOZZLE

Multi-Function Mist Coolant System

ORDER NO.VCS-500 CODE NO.2015-700

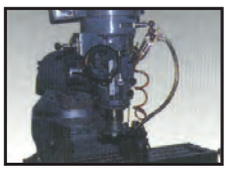
WEIGHT:0.8kg

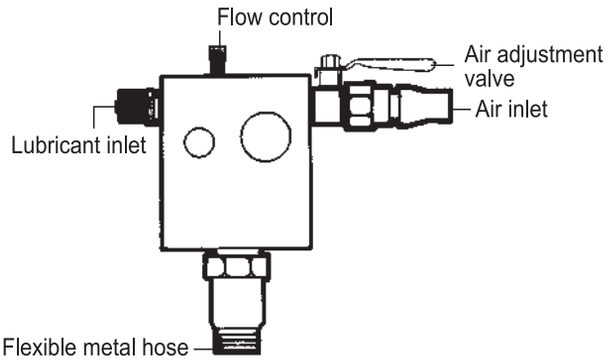


FEATURES

- Flexible functions as cooling, lubrication and blowing the metal chips can be performed at the same time.
- Designed and manufactured for improving machinability, cutting speed, and extending tool service life, Saving working time and production cost.
- It insures better quality of parts finishing and cutting performance.
- The unit help to creat micro-finish effect even working on tough alloy steels and exotic metals.

This mist coolant systems are suited to fit on lathe, milling, drilling, tapping, grinding, cutter grinding, NC, CNC, press, sawing machine.....





Mist Coolant With Magnetic Base

ORDER NO. VMH-71 (1 HOSE)
MAGNETIC BASE WITH
MIST COOLANT SYSTEM

ORDER NO.	BASE SIZE LXWXH(MM)	HOLDING POWER	MAIN ROD O.D X L	SUB ROD O.D X L	WEIGHT (kgs)	CODE NO.
VMH-71	62X50X55.5	75KGS	Ø15X500	1PCS.HOSE	2	2015-618

Adjustable Magnetic Nozzle Kit

CL-01

CL-02

CL-03

S-1 MAGNETIC FORCE 8kgs

CL-01A

CL-02A

CL-03A

L2-S MAGNETIC FORCE 15kgs

WITH PLASTIC NOZZLE & VALVE
O.D.34XH230mm

WITH STEEL NOZZLE
O.D.68X330H

- The adjustable magnetic nozzle is suitable for cooling and lubricating in machining process.
- Can be prolonged the cutter life and advance the accuracy and beauty of workpiece.
- By different of usage, there are much models for selection.
- Machine tool made by customer's specification and cooperated to develop.
- When using, please take out the spacer (under the magnetic base)

ORDER NO.	Weight	CODE NO.
CL-01	0.3kgs	2015-624
CL-02		2015-625
CL-03		2015-626
CL-01A		2015-627
CL-02A		2015-628
CL-03A		2015-629
S-1	0.2kgs	2015-630
L2-S	0.5kgs	2015-631

Adjustable Coolant Hoses & Valves

CODE NO. & DESCRIPTION

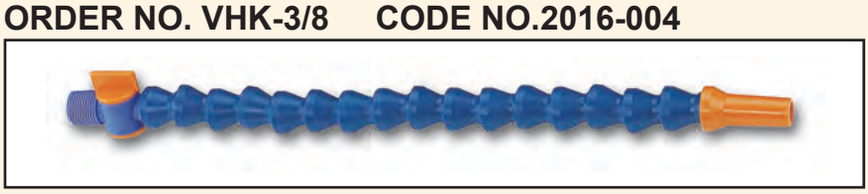
FIGURE

33CM Length Hose Kit
Assembled with:
1-1/4″ Male NPT Valve
1-20 Element Segments
1-(1/16″or 1/8″or 1/4″) Round Nozzle

ORDER NO. VHK-1/4 CODE NO.2016-002

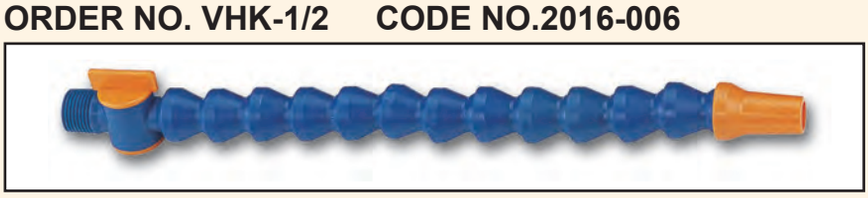
36CM Length Hose Kit
Assembled with:
1-3/8″ Male PT Valve
1-16 Element Segments
1-(1/4″ or 3/8″ or 1/2″) Round Nozzle

ORDER NO. VHK-3/8 CODE NO.2016-004



33CM Length Hose Kit
Assembled with:
1-1/2″ Male NPT Valve
1-12 Element Segments
1-(1/4″or 3/8″ or 1/2″) Round Nozzle

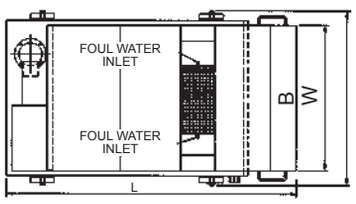
ORDER NO. VHK-1/2 CODE NO.2016-006

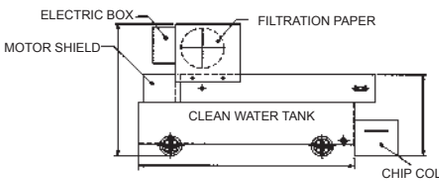


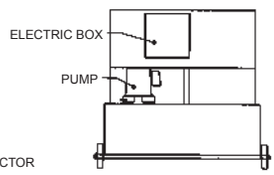
Paper Filter

FEATURES

- Appllicable to both ferrous and non-ferrous metals.
- Filtration effect depends on paper accuracy. Use 50μ,30μ,or 15μ.
- Not suitable for heavy machining for the sake of paper consumption.
- To save filtration material, use magnetic filter for roung filtration.
- Standard accessory:one roll of paper.

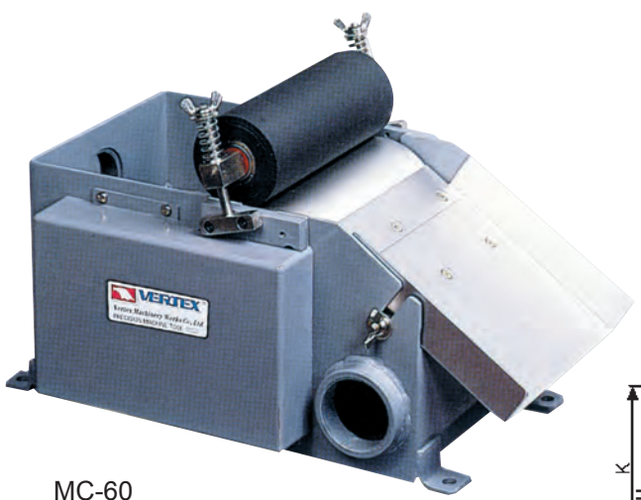






ORDER NO.	DISPOSAL CAPACITY L/MIN	WATER TANK CAPACITY	L	A	B	C	W	H	PUMP		PAPER MOTOR	PAPER	REMARKS	N.W (kgs)	GW (kgs)	CODE NO.
									HP	OUTLET						
PF-20	20	100	1050	850	600	400	720	610	1/8	PF1/2″	25W	W:500MM L :90M	wheels attached	95	120	2020-001
PF-40	40	120	1200	1000	600	400	720	660	1/8	PF1/2″	25W			130	150	2020-002
PF-60	60	140	1350	1150	600	400	720	660	1/8	PF1/2″	25W			140	170	2020-003
PF-80	80	160	1500	1300	600	400	720	660	1/4	PF3/4″	25W			170	190	2020-004
PF-120	120	210	1500	1300	800	400	920	740	1/2	PF3/4″	40W	W:700MM L :90M		185	210	2020-005
PF-160	160	260	1800	1600	800	400	920	740	1/2	PF3/4″	40W			250	280	2020-006

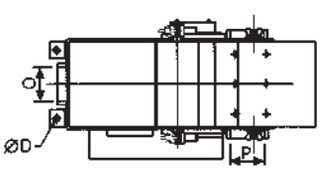
Magnetic Separator



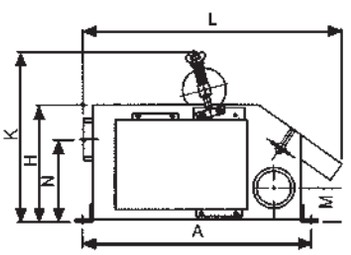
MC-60

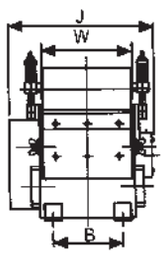
FEATURES

- Suitable in heavy machining for ferrous metal.
- No filtration-material consumption.
- Most economic in purchase & utilization cost.
- Able to serve rough filtration in other filtration process.



MC-20~160





Standard accessories

a.Chip collector 1pc

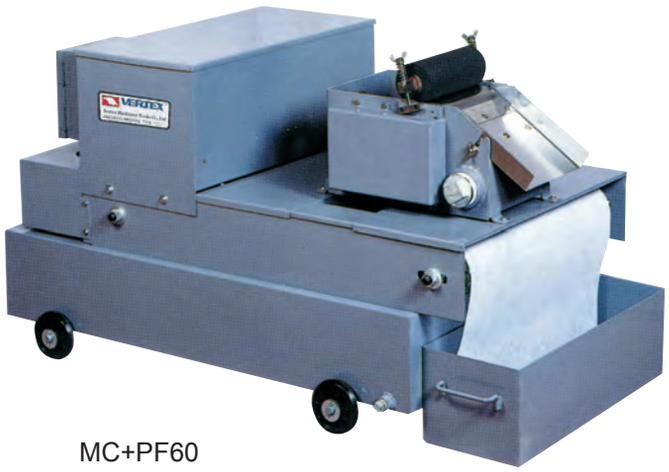
b.plugs 2pc

c.Elbow 1pc

d.Steel tubes 3pc

ORDER NO.	DISPOSAL CAPACITY L/MIN	L	W	H	M	N	A	B	D	J	K	INLET O	OUTLET P	MOTOR	N.W (kgs)	GW (kgs)	CODE NO.
MC-20	20	464	130	205	65	145	398	100	11	230	300	PF1 1/2″	PF1 1/2″	220V3Ø,25W	18	20	2020-010
MC-40	40	464	150	205	65	145	398	120	11	250	300	PF2″	PF2″	220V3Ø,25W	20	23	2020-011
MC-60	60	464	206	205	60	150	398	176	11	306	300	PF2″	PF2″	220V3Ø,25W	25	28	2020-012
MC-80	80	464	242	205	60	150	398	212	11	342	300	PF2″	PF1 1/2″	220V3Ø,25W	30	40	2020-013
MC-120	120	530	270	245	68	185	456	230	11	380	345	PF1 1/2″	PF3″	220V3Ø,40W	50	65	2020-014
MC-160	160	530	354	245	68	185	456	314	11	464	345	PF3″	PF3″	220V3Ø,40W	60	75	2020-015

Magnetic Separator & Paper Filter



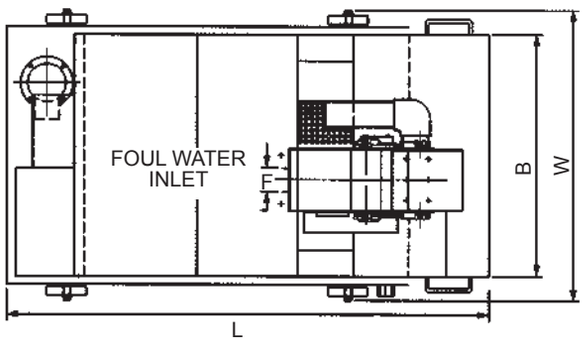
MC+PF60

APPLICABLE TO THE FOLLOWING WORKING MACHINES

- Plane grinding machine.
- Fine-grinding machine.
- Honing machine.
- Deep-hole drill.
- Internal/exterless cyilnder grinder.
- Centerless grinder.
- Please specify the power voltage in your order list.
- Specifications are subject to change without notice.

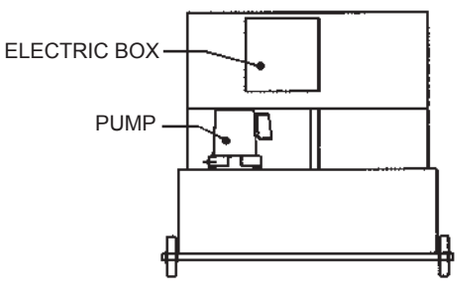
FEATURES

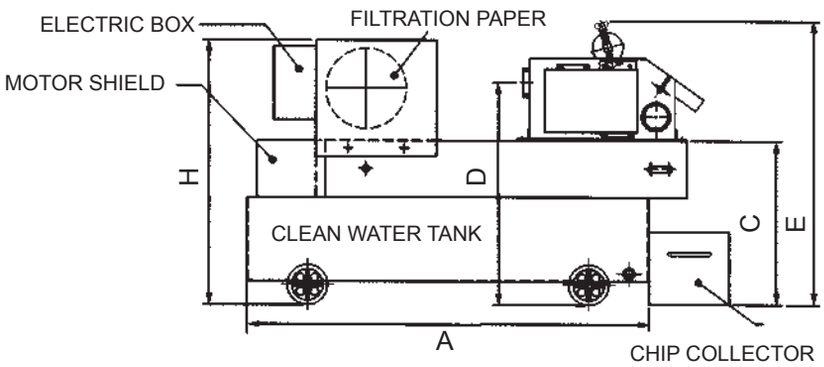
- Applicable to both ferrous and non-ferrous metals.
- Filtration effect depends on paper accuracy. Use 50μ,30μ,or 15μ.
- Rough filtration for chip in coolant with magnet and then fine filtration for impurities with paper will save the paper and upgrade filtration accuracy



DIMENSION DIAGRAM

- Standard accessory:one roll paper 30μ

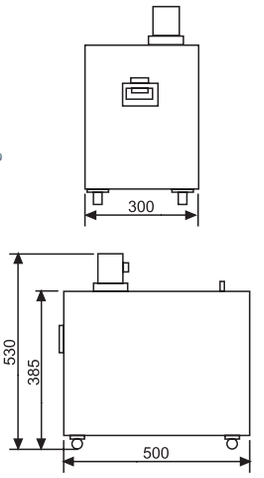




MAGNETIC SEPARATOR & PAPER FILTER SPECIFICATIONS

ORDER NO.	DISPOSAL CAPACITY L/MIN	WATER TANK CAPACITY	L	A	B	C	D	E	F	H	W	PUMP HP	PUMP OUTLET	PAPER MOTOR	PAPER	REMARKS	N.W (kgs)	GW (kgs)	CODE NO.
MC+PF-20	20	100	1050	850	600	400	550	655	PF1 1/2"	610	720	1/8	PF1/2"	25W	W:500MM L:90M	NO wheels	115	140	2020-020
MC+PF-40	40	120	1200	1000	600	400	550	705	PF2"	660	720	1/8	PF1/2"	25W			150	175	2020-021
MC+PF-60	60	140	1350	1150	600	400	555	705	PF2"	660	720	1/8	PF1/2"	25W			165	200	2020-022
MC+PF-80	80	160	1500	1300	600	400	555	705	PF2"	660	720	1/4	PF3/4"	25W			190	225	2020-023
MC+PF-120	120	210	1500	1300	800	400	590	750	PF2 1/2"	740	920	1/2	PF3/4"	40W	W:700MM L:90M		235	275	2020-024
MC+PF-160	180	260	1800	1600	800	400	605	750	PF3"	740	920	1/2	PF3/4"	40W			290	335	2020-025

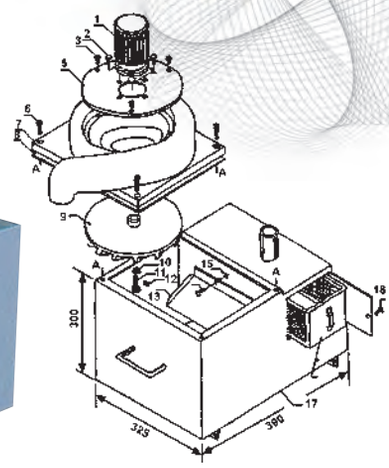
Coolant Tank



Unit: m/m

ORDER NO.	LxWxH	Motor	G.W.	CODE NO.
VC-601	500x300x530	1/8 HP	23kgs	2020-030

Dust Collector



Unit: m/m

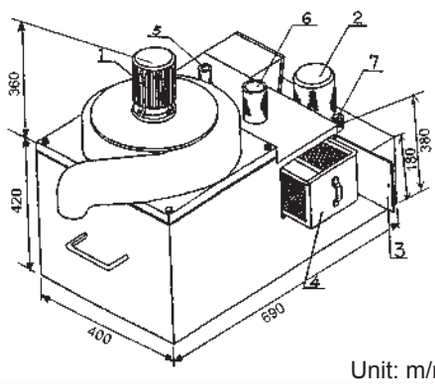
ORDER NO.	LxWxH	Motor	G.W.	CODE NO.
VC-602	560x370x720	1/2 HP	47kgs	2020-026

Dust-Suction And Coolant Tant

TWO IN ONE

PLEASE NOTIFY VOLTA & PHASE, WHEN YOU ORDERING.

Combination coolant and dust collector(10-12 J)
1. Dust suction motor
2. Coolant pump
3. Filter access door
4. Filter
5. Coolant return pipe
6. Dust inlet pipe
7. Pump outlet



Unit: m/m

ORDER NO.	LxWxH	Motor	G.W.	CODE NO.
VC-603	690x400x780	1/2 HPx1, 1/8 HPx1	80kgs	2020-027

Dust-Suction & Coolant Tant W/Magnetic Separator

THREE IN ONE

PLEASE NOTIFY VOLTA & PHASE, WHEN YOU ORDERING.

Unit: m/m

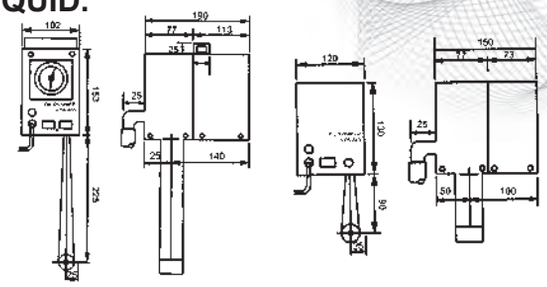
ORDER NO.	LxWxH	Motor	G.W.	CODE NO.
VC-606	900x780x850	1/2 HPx1, 1/8 HPx1	110kgs	2020-028

Oil Skimmer With Belt Type

OIL SKIMMER FOR MACHINE TOOL.
IT IS FOR CLEAR FLOATING OIL ON CUTTING LIQUID.

ORDER NO. VOS-800

ORDER NO. VOS-810



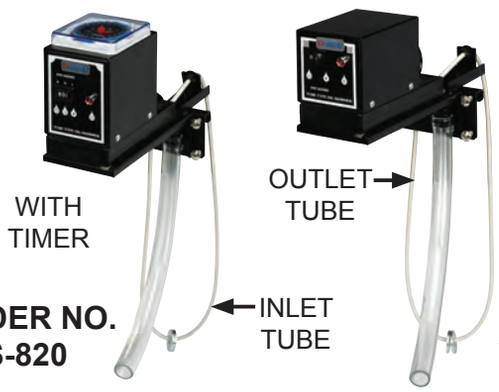
FEATURES

- Oily leather belt cycle for collecting oil and efficiently and completely getting rid of useless oil.
- Much less cost of running., without any material expended.
- Small volume., light weight., easy to install and to operate.
- Special leather belt with feature of excellent durability, heat-resistance, and chemical-resistance.
- VOS-800 attached a 24 hours procedure timer to run repeatly in accordance with time proportion which it is set, and also provides the best efficiency of sucking floating oil.

Unit: mm

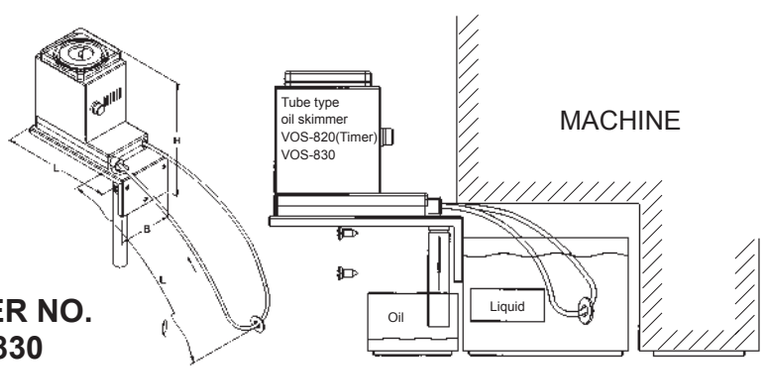
ORDER NO.	POWER SOURCE	CAPACITY	DIMENSION			WEIGHT (kgs)	BELT DIMENSION		DIMENSION OF HOSE	CODE NO.
			L	B	H		B	L		
VOS-800	AC 110/220V	4L/h	190m/m	102m/m	153m/m	3.4	39x800m/m		ø22x600m/m	2020-100
VOS-810			150m/m	102m/m	138m/m	3	39x550m/m			2020-101

Oil Skimmer With Belt Type



ORDER NO. VOS-820

ORDER NO. VOS-830

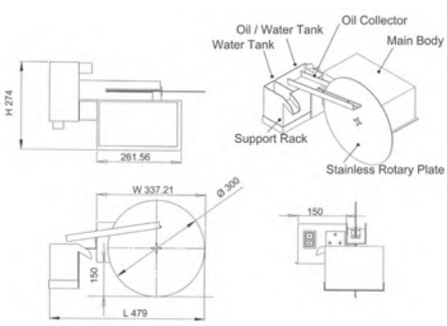


IF THE MACHINE DON'T HAVE SPACE FOR THE OIL SKIMMER. PLEASE CHOICE THIS TYPE.

Unit: mm

ORDER NO.	CAPACITY	DIMENSION			INLET TUBE SIZE	QUTLET TUBE SIZE		POWER SOVRCE	WEIGHT (kg)	CODE NO.
		L	B	H						
VOS-820	1L/hr	155m/m	78m/m	178m/m	I 1:350mm I 2:300mm I 3:200mm	ø22	150m/m	AC 110/220V	1.9	2020-102
VOS-830		155m/m	78m/m	140m/m					2	2020-103

Oil Skimmer With Rotary Plate Type



Unit: mm

ORDER NO.	CAPACITY	POWER SOURCE	DIMENSION			WEIGHT (kgs)	CODE NO.
			L	W	H		
VOS-850	1L/hr	AC 220V	479	337.21	274	8.6	2020-104

Precision Gauge Blocks

Gauge blocks are fundamental standards for linear measurement. For adjusting, checking. or inspecting measuring instruments and tools, and precision workpieces. Gauge blocks are used either individually or in combination of several blocks which are wrung together.

Steel gauge blocks are made of quality alloy steel. and carbide, the ceramics are also avilable.

The hardness number of the measuring surfaces is no less than HRC64.

The blocks have fine wear resistance, They are heat treated in special ways so as to stabilize their lengths.

STEEL METRIC GAUGE BLOCKS

ORDER NO.	Total blocks	Nominal dimension	Steps	No. of blocks	Grade	Weight (kg)	CODE NO.
VGB-112-0	112	1.0005 1.001-1.009 1.01-1.49 0.5-24.5 25-100	- 0.001 0.01 0.05 25	1 9 49 49 4	0	3.7	2006-070
VGB-112-1					1	3.7	2006-170
VGB-112-2					2	3.7	2006-270
VGB-103-0	103	1.005 1.01-1.49 0.5-24.5 25-100	- 0.01 0.5 25	1 49 49 4	0	3.6	2006-072
VGB-103-1					1	3.6	2006-172
VGB-103-2					2	3.6	2006-272
VGB-87-0	87	1.001-1.009 1.01-1.49 0.5-9.5 10-100	0.001 0.01 0.5 10	9 49 19 10	0	3	2006-073
VGB-87-1					1	3	2006-173
VGB-87-2					2	3	2006-273
VGB-47-0	47	1.005 1.01-1.09 1.1-1.9 1-24 25-100	- 0.01 0.1 1 25	1 9 9 24 4	0	2.4	2006-074
VGB-47-1					1	2.4	2006-174
VGB-47-2					2	2.4	2006-274
VGB-38-0	38	1.005 1.01-1.09 1.1-1.9 1-9 10-100	- 0.01 0.1 1 10	1 9 9 9 10	0	2.5	2006-075
VGB-38-1					1	2.5	2006-175
VGB-38-2					2	2.5	2006-275

CARBIDE METRIC GAUGE BLOCKS

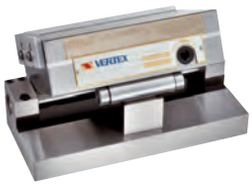
ORDER NO.	Total blocks	Nominal dimension	Steps	No. of blocks	Grade	Weight (kgs)	CODE NO.
VGB-112T-0	112	1.0005 1.001-1.009 1.01-1.49 0.5-24.5 25-100	- 0.001 0.01 0.05 25	1 9 49 49 4	0	5.8	2006-080
VGB-112T-1					1	5.8	2006-180
VGB-112T-2					2	5.8	2006-280
VGB-103T-0	103	1.005 1.01-1.49 0.5-24.5 25-100	- 0.01 0.5 25	1 49 49 4	0	5.6	2006-081
VGB-103T-1					1	5.7	2006-181
VGB-103-2					2	5.7	2006-281
VGB-87T-0	87	1.001-1.009 1.01-1.49 0.5-9.5 10-100	0.001 0.01 0.5 10	9 49 19 10	0	4.8	2006-082
VGB-87T-1					1	4.9	2006-182
VGB-87T-2					2	4.8	2006-282
VGB-47T-0	47	1.005 1.01-1.09 1.1-1.9 1-24 25-100	- 0.01 0.1 1 25	1 9 9 24 4	0	4.6	2006-083
VGB-47T-1					1	4.6	2006-183
VGB-47T-2					2	4.6	2006-283

JIS/ISO/DIN ACCURACY STANDARD

SIZE OVER UP TO	ACCURACY AT 20ºC (µm) GRADE 00	GRADE 0
10mm	±0.06	±0.12
10 - 25mm	+0.07	±0.14
25 - 50mm	±0.10	±0.20
50 - 75mm	±0.12	±0.25
75 - 100mm	±0.14	±0.30
100 - 150mm	-	±0.40

SIZE OVER UP TO	ACCURACY AT 20ºC (µm) GRADE 1	GRADE 2
10mm	±0.20	±0.45
10 - 25mm	±0.30	±0.60
25 - 50mm	±0.40	±0.80
50 - 75mm	±0.50	±1.00
75 - 100mm	±0.60	±1.20
100 - 150mm	±0.80	±1.60

Ceramic Gauge Blocks



Gauge blocks are fundamental standards for linear measurement. For adjusting, checking. or inspecting measuring instruments and tools, and precision workpieces.
Gauge blocks are used either individually or in combination of several blocks which are wrung together.

JIS/ISO/DIN ACCURACY STANDARD

SIZE OVER UP TO	ACCURACY AT 20ºC (µm)	
	GRADE 00	GRADE 0
10mm	±0.06	±0.12
10 - 25mm	+0.07	±0.14
25 - 50mm	±0.10	±0.20
50 - 75mm	±0.12	±0.25
75 - 100mm	±0.14	±0.30
100 - 150mm	-	±0.40

SIZE OVER UP TO	ACCURACY AT 20ºC (µm)	
	GRADE 1	GRADE 2
10mm	±0.20	±0.45
10 - 25mm	±0.30	±0.60
25 - 50mm	±0.40	±0.80
50 - 75mm	±0.50	±1.00
75 - 100mm	±0.60	±1.20
100 - 150mm	±0.80	±1.60

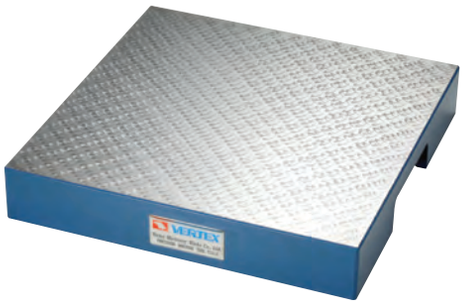
CERAMIC GAUGE BLOCKS

ORDER NO.	Total blocks	Nominal dimension	Steps	No. of blocks	Grade	Weight (kgs)	CODE NO.
VGB-112C-0	112	1.0005 1.001-1.009 1.01-1.49 0.5-24.5 25-100	- 0.001 0.01 0.05 25	1 9 49 49 4	0	3.7	2006-090
VGB-112C-1					1	3.7	2006-190
VGB-103C-0	103	1.005 1.01-1.49 0.5-24.5 25-100	- 0.01 0.5 25	1 49 49 4	0	3.6	2006-091
VGB-103C-1					1	3.6	2006-191
VGB-87C-0	87	1.001-1.009 1.01-1.49 0.5-9.5 10-100	0.001 0.01 0.5 10	9 49 19 10	0	3	2006-092
VGB-87C-1					1	3	2006-192
VGB-47C-0	47	1.005 1.01-1.09 1.1-1.9 1-24 25-100	- 0.01 0.1 1 25	1 9 9 24 4	0	2.4	2006-093
VGB-47C-1					1	2.4	2006-193

HOW TO CHOICE THE BLOCK FOR SINE BAR

DISTANCE / GAUGE BLOCK HEIGHT / CAN GET DEGREE	SIN BAR CENTER 50	SIN BAR CENTER 100
2˚	1.7405	3.4899
3˚	2.6168	5.2336
4˚	3.4878	6.9756
5˚	4.3578	8.7155
6˚	5.2264	10.4528
7˚	6.0935	12.1869
8˚	6.9587	13.9173
9˚	7.8217	15.6434
10˚	8.6824	17.3648
11˚	9.5404	19.0809
12˚	10.3956	20.7911
13˚	11.2476	22.4951
14˚	12.0961	24.1921
15˚	12.9401	25.8819
16˚	13.7819	27.5637
17˚	14.6186	29.2371
18˚	15.4058	30.9017
19˚	16.2784	32.5586
20˚	17.1010	34.2020
21˚	17.9184	35.8367
22˚	18.7303	37.4606
23˚	19.5366	39.0713
24˚	20.3368	40.6736
25˚	21.1309	42.2618
26˚	21.9186	43.8371
27˚	22.6995	45.3990
28˚	23.4736	46.9471
29˚	24.2405	48.4809
30˚	25.0000	50.0000
31˚	25.7519	51.5038
32˚	26.4960	52.9919
33˚	27.2320	54.4639
34˚	27.9596	55.9192
35˚	28.6788	57.3576
36˚	29.3893	58.7785
37˚	30.0908	60.1815
38˚	30.7831	61.5661
39˚	31.4660	62.9320
40˚	32.1394	64.2787
41˚	32.8030	65.6059
42˚	33.4565	66.9130
43˚	34.0999	68.1998
44˚	34.7329	69.4658
45˚	35.3553	70.7106

Cast Iron Surface Plates



- These surface plates are designed for a diversity of applications where a smooth surface is needed.
- Rigidity and lasting accuracy are ensured by adequate top and side thickness and ribbed con-strucntion.
- The surfaces are free from pinholes.
  Precisely finished by planing and hand scrap-ing, suitable for various kinds of highest precision work, inspection and countless other uses.

Surface Plates

Unit:m/m

ORDER NO.	SIZE	SURFACE ACCURACY	APPROX. WEIGHT	CODE NO.
	mm	mm	kgs	
VS-01	200x200	0.005/100	7.1	2021-001
VS-02	250x250		11.1	2021-002
VS-03	250x300		10.9	2021-003
VS-04	300x300		12.6	2021-004
VS-05	300x400	0.006/100	20.1	2021-005
VS-06	300x450		24	2021-006
VS-07	450x450		50.5	2021-007
VS-08	500x500		56	2021-008
VS-09	450x600		64.5	2021-009
VS-10	600x600		93	2021-010
VS-11	600x900	0.007/100	118	2021-011
VS-12	900x900		313	2021-012
VS-13	900x1200		431	2021-013

STAND

ORDER NO.	STAND SIZE	KGS	CODE NO.
	mm		
VSD-09	450x600x700		2021-009A
VSD-10	600x600x700		2021-010A
VSD-11	600x900x600		2021-011A
VSD-12	900x900x600		2021-012A
VSD-13	900x1200x600		2021-013A

Black Granite Surface Plates

- Black Granite Surface Plates meet or exceed Federal Specification GGG-P-463c.
- Harder then steel.
- Does not nick or burr.
- Retains accuracy for years.
- Auto-coliimator checked for overall accuracy.
- Guaranteed repeat reading.
  Includes an inspection certificate to show the unilateral accuracy of plate.
- Does not rust or corrode.
- All surface plates include inbound freight from factory.

Surface Plates

Unit:m/m

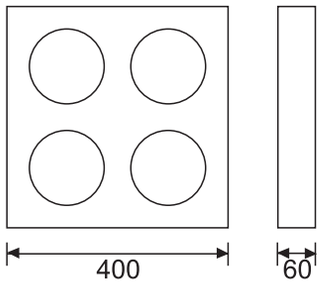
ORDER NO.	SIZE	SURFACE ACCURACY	APPROX. WEIGHT	CODE NO.
	mm	mm	kgs	
VSG-05	300x300x60	0.0065	25	2021-020
VSG-06	300x450x60	0.0065	31	2021-021
VSG-07	450x450x75	0.0065	46	2021-022
VSG-09	450x600x100	0.007	79	2021-023
VSG-10	600x600x100	0.009	110	2021-024
VSG-11	600x900x110	0.009	210	2021-025
VSG-13	900x1200x135	0.012	470	2021-027
VSG-14	1000x1000x135	0.012	450	2021-028
VSG-15	1000x1500x200	0.013	670	2021-029
VSG-21	900x900x160	0.013	380	2021-032

STAND

ORDER NO.	STAND SIZE	KGS	CODE NO.
	mm		
VSGD-09	450x600x700	27.4	2021-023A
VSGD-10	600x600x700	30	2021-024A
VSGD-11	600x900x600	33.5	2021-025A
VSGD-13	900x1200x600	86	2021-027A
VSGD-14	1000x1000x600	87	2021-028A
VSGD-15	1000x1500x600	100	2021-029A
VSGD-21	900x900x600	73.4	2021-032A

Accuracy and O-Ladge Style available only in toolroom Grade A

Granite Square Rulers

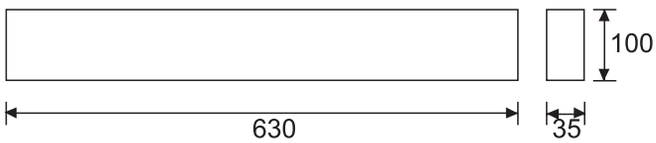


Accuracy:
SQUARENESS 0.002 m/m

Unit: m/m

ORDER NO.	SIZE	G.W.(kgs)	CODE NO.
VQR-400	400x400x60	24.8	2021-050
VQR-500	400x500x60	40.2	2021-051

Granite Straight Rulers



Accuracy:
PARALLELISM 0.002 m/m

Unit: m/m

ORDER NO.	SIZE	G.W.(kgs)	CODE NO.
VSR-630	630x100x35	8.7	2021-060
VSR-1000	1000x80x50	13.7	2021-061

Granite Triangle Ruler

mm

ORDE NO.	Size	Squareness	Thickness	Weight (kgs)	CODE NO.
VGT-300	300x200	0.002	30	5.7	2022-020
VGT-400	400x250	0.003	30	8.4	2022-021
VGT-600	600x400	0.004	63	27.5	2022-022

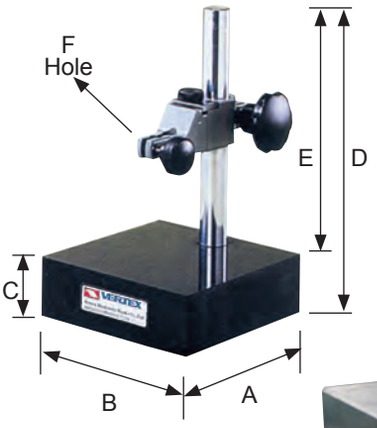
Granite V-Block

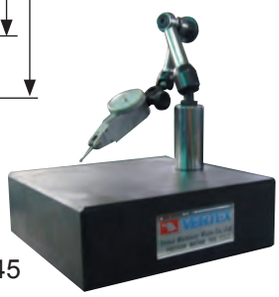
PAIR

mm

ORDER NO.	CAPACITY	Size	GRADE	KGS	CODE NO.
VGV-63	Ø10~50	63x63x63	0	1.7	2022-030
VGV-100	Ø50~80	100x100x100	0	6.3	2022-031

Granite Surface Stand





VH-45

ACCURACY: 0.005/100mm

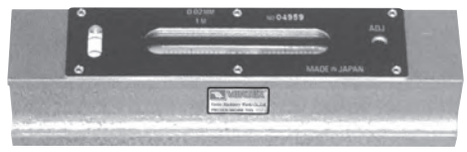
ORDER NO.	AxB GRANITE PLATE DIEMENSION	C	D	E	F	WEIGHT (kgs)	CODE NO.
VH-41	6″ x 6″ 150x150mm	52	252	200	8m/m or 3/8″	5.2	2022-001
VH-42	6″x 9″ 150x220mm	52	252	200	8m/m or 3/8″	7.9	2022-002
VH-43	9″x 12″ 230x300mm	90	290	200	8m/m or 3/8″	19.1	2022-003
VH-45	6″ x 6″ 150x150mm	52	232	180	8m/m or 3/8″	4.4	2022-005

Cylindrical Squares Steel

mm

ORDER NO.	ØD X L	ACCURACY	WEIGHT (kgs)	CODE NO.
VCS-300	100x300	0.005/100 m/m		2022-010
VCS-400	100x400	0.005/100 m/m	16	2022-011

Horizontal Leveling Instrument



0.02m/m

ORDER NO.	DIMENSION	WEIGHT (kgs)	CODE NO.
VLI-100	100x38x36	1.1	2022-040
VLI-150	150x50x45	1.6	2022-041
VLI-200	200x50x45	2.1	2022-042

Precision Square Level

0.02m/m

ORDER NO.	DIMENSION	WEIGHT(kgs)	CODE NO.
VSL-200	200x200x40	3.8	2022-050
VSL-250	250x250x40	5.8	2022-051
VSL-300	300x300x40	7.5	2022-052

Cleaning Paper

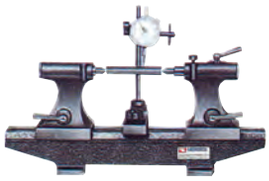
ORDER NO. P-1000(PAPER)
CODE NO.2021-200

SIZE: WIDTH: 250M/M (±5M/M)
LENGTH: 350M, G.W. 11kgs
PACK: 2 ROLL/CARTON
COLOR: WHITH

ORDER NO. S-1000(STAND)
CODE NO.2021-220

450L x 330W x 940H
G.W. 2.7kgs

Concentric Test Stand



VCI-400

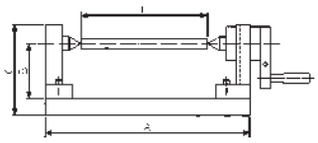
NEW

VCI-200

ORDER NO.	LENGTH	WIDTH	HEIGHT	CENTER DISTANCE	CENTER HEIGHT	WEIGHT (kgs)	CODE NO.
VCI-200	490	90	100	200	145	22	2021-101
VCI-300	530	90	100	300	145	26.8	2021-105
VCI-400	650	90	100	400	145	29.6	2021-102
VCI-600	1000	200	230	600	200	138.5	2021-106
VCI-800	1200	200	230	800	200	140	2021-103

WITHOUT INDICATORS

VCI-300P



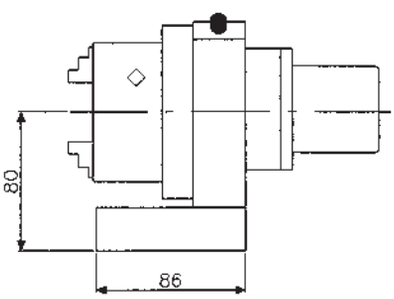
Unit:mm

ORDER NO.	A	B	C	L	Roundness	Parallelism	Squareness	Graduation	N.W. (kgs)	CODE NO.
VCI-300P	300	80	133	0-120	0.002/100	±0.002/100	0.002/100	360°	22	2021-110
VCI-400P	400	80	133	0-220	0.002/100	±0.002/100	0.002/100	360°	25	2021-111
VCI-500P	500	80	133	20-320	0.002/100	±0.002/100	0.002/100	360°	28	2021-112

Fixed Speed Punch Former

ORDER NO.V-PS-80M CODE NO.2021-130 **Auto Type**

NEW



- The Punch Former with a motor attached can be applied to precisely grind a punch to round in a short time and saves the processing time.
- ER Collet Type and Chuck Type can clamp workpieces in a wide range.

O.D	I,D	Max. Dia. of Workpiece	Center Heignt	Motor Output-W Input-V	Roundness	Parallelism	Squareness	Graduation	N.W. (kg)
2-70	24-64	Ø50	80	15W 110/220V	0.002	0.002/100	0.002/100	360°	11.72

Pin Gauge

FEATURES:

DIAMETER	EACH STEP SIZE	LENGTH	ACCURACY IN DIAMETER	ROUNDNESS TOLERENCE	HARDNESS
0.05~0.09	0.01	5~10	±0.5um	0.5um	HV480
0.10~0.19	0.01	20	±0.5um	0.5um	HV480
0.20~0.99	0.01	40	±1um	0.8um	HV650
1.00~10.00	0.01	50	±1um	0.8um	HV650
10.01~20.00	0.01	50	±1.5um	1.6um	HV650
20.00~30.00	0.01	50	±1.5um	1.6um	HV650

EACH 0.01mm FOR ONE STEP SIZE

ORDER NO.	NOMINAL DIMENSION EACH 0.01mm FOR 1 PCS	PCS/ SET	WEIGHT (kgs)	CODE NO.
VPG-0B	0.50, 0.51, 0.52~1.00	51	1	2022-060
VPG-1A	1.00, 1.01, 1.02~1.50	51	1	2022-061
VPG-1B	1.50, 1.51, 1.52~2.00	51	1	2022-062
VPG-2A	2.00, 2.01, 2.02~2.50	51	1	2022-063
VPG-2B	2.50, 2.51, 2.52~3.00	51	1	2022-064
VPG-3A	3.00, 3.01, 3.02~3.50	51	1	2022-065
VPG-3B	3.50, 3.51, 3.52~4.00	51	1	2022-066
VPG-4A	4.00, 4.01, 4.02~4.50	51	1.5	2022-067
VPG-4B	4.50, 4.51, 4.52~5.00	51	1.5	2022-068
VPG-5A	5.00, 5.01, 5.02~5.50	51	1.5	2022-069
VPG-5B	5.50, 5.51, 5.52~6.00	51	1.5	2022-070
VPG-6A	6.00, 6.01, 6.02~6.50	51	3.1	2022-071
VPG-6B	6.50, 6.51, 6.52~7.00	51	3.2	2022-072
VPG-7A	7.00, 7.01, 7.02~7.50	51	3.5	2022-073
VPG-7B	7.50, 7.51, 7.52~8.00	51	3.5	2022-074
VPG-8A	8.00, 8.01, 8.02~8.50	51	3.8	2022-075
VPG-8B	8.50, 8.51, 8.52~9.00	51	3.8	2022-076
VPG-9A	9.00, 9.01, 9.02~9.50	51	4	2022-077
VPG-9B	9.50, 9.51, 9.52~10.00	51	4	2022-078
VPG-10A	10.00, 10.01, 10.02~10.50	51	5	2022-079
VPG-10B	10.50, 10.51, 10.52~11.00	51	5	2022-080

Measuring Instrument

PRECISION VERNIER CALIPER

L: 150, 200, 300 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VVC-6″	0.02 mm 1/1000″	0.4	2023-001
VVC-8″		0.5	2023-002
VVC-12″		0.8	2023-003

DIGITAL ELECTRONIC CALIPER

L: 150, 200, 300 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VEC-6″	0.01 mm	0.4	2023-010
VEC-8″		0.5	2023-011
VEC-12″		0.8	2023-012

DIAL CALIPER

L: 150, 200, 300 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VDC-6	0.02 mm	0.4	2023-050
VDC-8		0.5	2023-051
VDC-12		0.9	2023-052

OUTSIDE MICROMETER

0 - 25 mm
25 - 50 mm
50 - 75 mm
75 - 100 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VOM-0025	0.01 mm	0.3	2023-060
VOM-2550		0.4	2023-061
VOM-5075		0.5	2023-062
VOM-75100		0.6	2023-063
VOM-100125		1	2023-064

INSIDE MICROMETER

5 - 30 mm
25 - 50 mm
50 - 75 mm
75 - 100 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VIM-0530	0.01 mm	0.3	2023-065
VIM-2550		0.4	2023-066
VIM-5075		0.4	2023-067
VIM-75100		0.4	2023-068

Measuring Instrument

DIAL INDICATOR

0.01~10 mm

ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VDI-1	0.01 mm	0.3	2023-020

DIAL TEST INDICATOR

0.01~0.8 mm

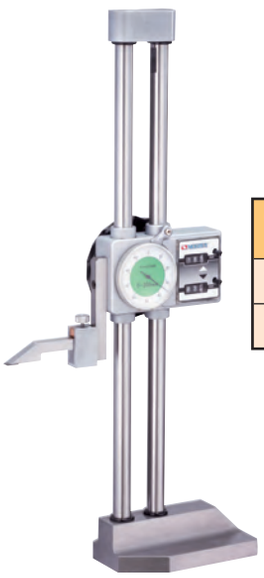
ORDER NO.	1 SCALE	WEIGHT(kg)	CODE NO.
VDI-0.8A	0.01 mm	0.2	2023-070

HEIGHT VERNIER CALIPER

H: 300, 600, 450, 500

ORDER NO	1 SCALE	WEIGHT (kgs)	CODE NO.
VHG-12	0.02 mm	4	2023-034
VHG-18		11.9	2023-035
VHG-20		10.7	2023-036
VHG-24		11.8	2023-037

HEIGHT DIAL CALIPER



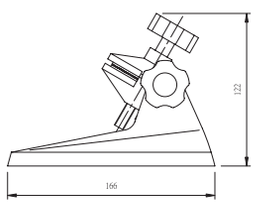
H: 300, 600 mm

ORDER NO.	1 SCALE	WEIGHT (kgs)	CODE NO.
VHD-12	0.01 mm	4	2023-080
VHD-24		9.4	2023-081

MICROMETER HEAD

ORDER NO.	SCALE x L	WEIGHT(kg)	CODE NO.
VMH-25	0.01x25 mm	0.2	2023-040

MICROMETER STAND



160x110x130 m/m

ORDER NO.	WEIGHT(kg)	CODE NO.
VH-19	1.3	2023-090

Measuring Tool Kits

NEW

ORDER NO.	SET INCLUDING	WEIGHT (kg)	CODE NO.
VVC-20	VVC-6 x 1 PCS VOM-0025 x 1 PCS VIM-0530 x 1 PCS	1.37	2023-009

Angle Level

Oil Type Protractor With Magnets

VAL-60

VAL-80

VAL-50

VAL-30

VAL-10

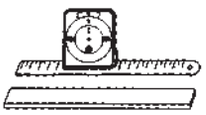
VAL-20

ORDER NO.	LxWxH	BASE	ACU	WEIGHT (kg)	CODE NO.
VAL-10	78x62x14mm	ABS	0.2º	0.2	2033-100
VAL-30	93x79x15mm	ABS	0.1º	0.2	2033-101
VAL-50	93x79x16mm	METAL	0.083º	0.4	2033-102
VAL-60	140x130x20mm	METAL	0.05º	1	2033-103
VAL-20	70x65x30mm	ABS	0.2º	0.2	2033-104
	13mm/1/2"x3M/10'				
VAL-80	335x73x30mm	ALUMINUM0.2	0.2º	0.7	2033-105
	13mm/1/2"x3M/10'				

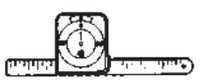
- The pointer is rotating in a hydraulic oil for stable, precise and error-eliminating reading, even to a differential sub-graduation less than one degree. The two pointers or the vernier versus the annular graduations are read supper imposedly with minimum reading error.
- Double annular graduations are provided for preventing wisual reading error.
- The transparent temperature-resistant oil may visually amplify the pointer for a better optical reading.
- The double-rail magnet may attract this angle level on a round pipe or a surface of ferrous material.
- An extension rule could be inserted into the bottom slot for measurement and drawing line for wider area.

1. RESET: For setting a pseude-horizon, upon which a new angle on the pseudo-horizon can be directly measured.
2. DOUBLE CHECK: Double annular grduations provided for caliibrating either positive or negative degrees.

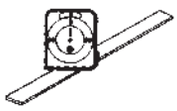
MULTI-FUNCTION ANGLE LEVEL



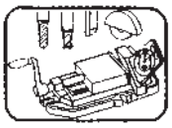
A Thin iron plate (The magnet power the thicker the weaker) may be attracted under the angle level for wider measurement.



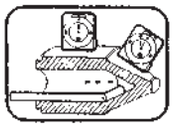
Inserting a straight extension rule into a bottom slot If the angle level.



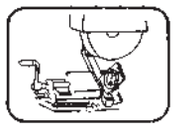
Attracting the angle level on an iron plate for measuring an angle inside a tank.



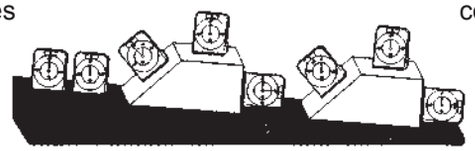
1. Suitable for working machines



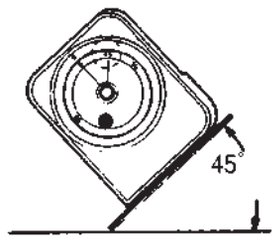
2. Grinding machine



3. Out & inner cone angle

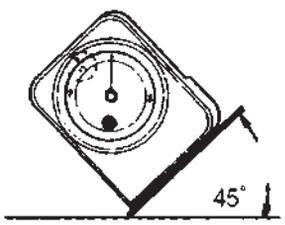


A standard angle block laid on a Non-horizontal Plane showing several measured positions by this angle level.



Finding an angle

Align the movable degree scale 0º reading, in line with the fixed vernier, 0º mark. Set your instrument's bottom surface on the object to be measured. Your reading off the pointer is your angle of inclination from 0º



OVERLAP

Setting Specific angles

Align the desired angle on the movable scale to the vernier 0º mark.
Tilt the instrument until the pointer is aligned with the 0º mark.

ACCURACY

/

SPEED

/

RESPONSIBILITY

/

COOPERATIVE

C1~C23	ER SERIES COLLET CHUCK SYSTEM	C61~C64	SK SPRING COLLET SYSTEM
C24~C30	OZ SERIES COLLET CHUCK SYSTEM	C65	ER COLLET CHUCK SYSTEM 3D-TASTER
C31	POSI-LOCK SERIES	C66~C72	DRILL CHUCK SERIES / 3D-TASTER
C32~C33	MULTI-LOCK MILLING CHUCK	C73~C80	BORING HEAD SERIES
C34	COLLETS C TYPE	C81~C89	PRECISION FINISH BORING HEAD SETS
C35	DOUBLE FACE CONTACT MUITI LOCK MILLING CHUCK / QUICK-CHANGE TOLLING SYSTEM	C90~C94	TOUCH POINT / PRESETTER SERIES
		C95~C104	TAPPING SYSTEM
C36~C38	COLLETS (TG,5C,R8,MT)	C105~C109	AIR TAPPING UNIT
C39	PRILL CHUCK ARBOR / TAPER SLEEVE	C110~C111	TOOL STAND / LOCKING DEVICE
C40~C45	TOOL HOLDER (DIN2080 / 69871A ISO / NT / BT)	C112~C113	SHEATH RACK TOOL CARTS SPINDLE TAPER WIRE
C46~C48	PULL STUDS		
		C114	TOOL PRESETTER
C49~C51	COMPLETE NC TOOLING SET		
		C115	TOOL CABINET
C52~C54	TOOL HOLDER		
		C116	PARTS CABINET
C55~C60	HSK-A6 / HIGH SPEED TOOLING SYTEM		
		C117	STANDARD / DRILL CHACK TAPER

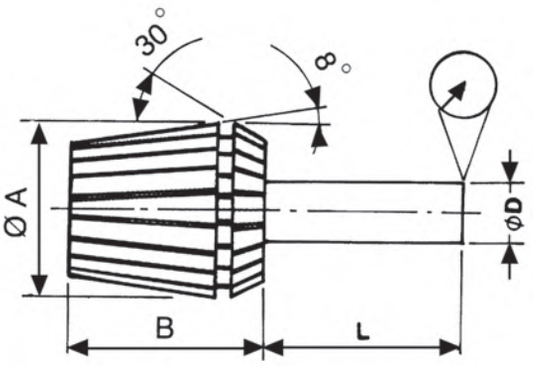
TOOLING SYSTEM

ER Spring Collet Chuck System

ER collet system of VERTEX is made of special elastic steel material under excellent heat treament and precise grinding process, so it has precise accuracy, powerful clamping ability, and is durable. This collet can clamp for a specific standard size and its next size, (Refer to the data sheet on page 2). It can be widely used for boring, milling, drilling and tapping as well as for grinding operation, and is available for all sizes.

ER COLLET DIMENSIONS

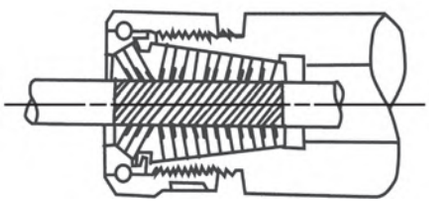
TYPE	A	B
ER-8	8.5	13.5
ER-11	11.5	18
ER-16	17	27
ER-20	21	31
ER-25	26	35
ER-32	33	40
ER-40	41	46
ER-50	52	60



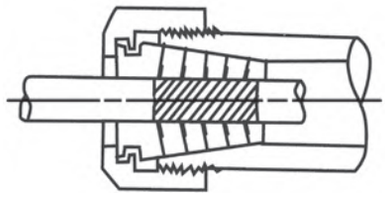
L mm	D mm	DIN6343 Standard precision	VERTEX Standard precision	A Grade Optional
6	1.0-1.4	0.02	0.015	0.01
10	1.5-2.9	0.02	0.015	0.01
16	3.0-5.9	0.02	0.015	0.01
25	6.0-9.9	0.02	0.015	0.01
40	10.0-17.9	0.03	0.02	0.01
50	18.0-26.9	0.03	0.02	0.01
60	27.0-34.9	0.03	0.02	0.01

THE HIGH PRECISION OF A GRADE IS AVAILABLE

double-taper chuck



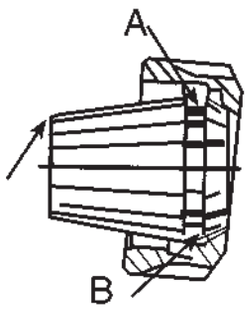
single-taper chuck



POWERFUL CLAMPING STRENGTH

The handle of the drill with double-taper chuck is longer than that with single-taper (grinding spring) collet. The clamping strength will be more powerful, if a screw-driver fastened by steel ball is adopted.

Mounting instructions for ER collets DIN 6499-A and DIN 6499-B



A - Place collet inside nut and rotate the nut to engage with the extractor spiral in collet groove.

B - Only then mount nut and collet together into the collet holder or machine spindle.

Note: Never use a 12-11mm collet to clamp a 12.2mm diameter, but rather use a 13-12mm collet.

ER Spring Collet Chuck System

STANDARD PRECISION TYPE

DIN 6499

ER COLLET SET WITH CLAMPING RANGE

TYPE	ER-8			ER-11			ER-16			ER-20		
COMPLET SET	9PCS/SET			7PCS/SET			10PCS/SET			12PCS/SET		
FULL SET	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.
	V08000	0.5-5.0	3001-101	V11000	0.5-7.0	3002-101	V16000	0.5-10.0	3003-101	V20000	1-13	3004-101
INDIVIDUAL UNIT	V08010	1.0-0.5	3001-001	V11010	1.0-0.5	3002-001	V16010	1.0-0.5	3003-001	V20020	2-1	3004-001
	V08015	1.5-1.0	3001-002	V11020	2.0-1.5	3002-002	V16020	2.0-1.0	3003-002	V20030	3-2	3004-002
	V08020	2.0-1.5	3001-003	V11030	3.0-2.5	3002-003	V16030	3.0-2.0	3003-003	V20040	4-3	3004-003
	V08025	2.5-2.0	3001-004	V11040	4.0-3.5	3002-004	V16040	4.0-3.0	3003-004	V20050	5-4	3004-004
	V08030	3.0-2.5	3001-005	V11050	5.0-4.5	3002-005	V16050	5.0-4.0	3003-005	V20060	6-5	3004-005
	V08035	3.5-3.0	3001-006	V11060	6.0-5.5	3002-006	V16060	6.0-5.0	3003-006	V20070	7-6	3004-006
	V08040	4.0-3.5	3001-007	V11070	7.0-6.5	3002-007	V16070	7.0-6.0	3003-007	V20080	8-7	3004-007
	V08045	4.5-4.0	3001-008	V11015	1.5	3002-008	V16080	8.0-7.0	3003-008	V20090	9-8	3004-008
	V08050	5.0-4.5	3001-009	V11025	2.5	3002-009	V16090	9.0-8.0	3003-009	V20100	10-9	3004-009
				V11035	3.5	3002-010	V16100	10.0-9.0	3003-010	V20110	11-10	3004-010
				V11045	4.5	3002-011	V16015	1.5	3003-011	V20120	12-11	3004-011
				V11055	5.5	3002-012	V16025	2.5	3003-012	V20130	13-12	3004-012
				V11065	6.5	3002-013	V16035	3.5	3003-013	V20010	1.0	3004-013
							V16045	4.5	3003-014	V20025	2.5	3004-014
	Note: APPROXIMATE FOR EACH		WEIGHT (kgs)				V16055	5.5	3003-015	V20035	3.5	3004-015
							V16065	6.5	3003-016	V20045	4.5	3004-016
	ER-8		0.01				V16075	7.5	3003-017	V20055	5.5	3004-017
	ER-11		0.02				V16085	8.5	3003-018	V20065	6.5	3004-018
	ER-16		0.03				V16095	9.5	3003-019	V20075	7.5	3004-019
	ER-20		0.05							V20085	8.5	3004-020
	ER-25		0.07							V20095	9.5	3004-021
	ER-32		0.15							V20105	10.5	3004-022
	ER-40		0.28							V20115	11.5	3004-023
	ER-50		0.54							V20125	12.5	3004-024

ER Spring Collet Chuck System

STANDARD PRECISION TYPE

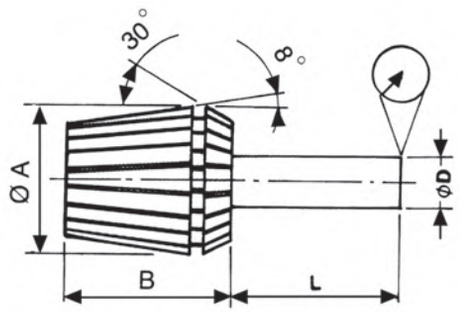
DIN 6499

ER COLLET SET WITH CLAMPING RANGE

ER-25			ER-32			ER-40			ER-50		
15PCS/SET			18PCS/SET			23PCS/SET			12PCS/SET		
ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.
V25000	1-16	3005-101	V32000	2-20	3006-101	V40000	3-26	3007-101	V50000	10-34	3008-101
V25020	2-1	3005-001	V32030	3-2	3006-001	V40040	4-3	3007-001	V50120	12-10	3008-001
V25030	3-2	3005-002	V32040	4-3	3006-002	V40050	5-4	3007-002	V50140	14-12	3008-002
V25040	4-3	3005-003	V32050	5-4	3006-003	V40060	6-5	3007-003	V50160	16-14	3008-003
V25050	5-4	3005-004	V32060	6-5	3006-004	V40070	7-6	3007-004	V50180	18-16	3008-004
V25060	6-5	3005-005	V32070	7-6	3006-005	V40080	8-7	3007-005	V50200	20-18	3008-005
V25070	7-6	3005-006	V32080	8-7	3006-006	V40090	9-8	3007-006	V50220	22-20	3008-006
V25080	8-7	3005-007	V32090	9-8	3006-007	V40100	10-9	3007-007	V50240	24-22	3008-007
V25090	9-8	3005-008	V32100	10-9	3006-008	V40110	11-10	3007-008	V50260	26-24	3008-008
V25100	10-9	3005-009	V32110	11-10	3006-009	V40120	12-11	3007-009	V50280	28-26	3008-009
V25110	11-10	3005-010	V32120	12-11	3006-010	V40130	13-12	3007-010	V50300	30-28	3008-010
V25120	12-11	3005-011	V32130	13-12	3006-011	V40140	14-13	3007-011	V50320	32-30	3008-011
V25130	13-12	3005-012	V32140	14-13	3006-012	V40150	15-14	3007-012	V50340	34-32	3008-012
V25140	14-13	3005-013	V32150	15-14	3006-013	V40160	16-15	3007-013			
V25150	15-14	3005-014	V32160	16-15	3006-014	V40170	17-16	3007-014			
V25160	16-15	3005-015	V32170	17-16	3006-015	V40180	18-17	3007-015			
			V32180	18-17	3006-016	V40190	19-18	3007-016			
			V32190	19-18	3006-017	V40200	20-19	3007-017			
			V32200	20-19	3006-018	V40210	21-20	3007-018			
						V40220	22-21	3007-019			
						V40230	23-22	3007-020			
						V40240	24-23	3007-021			
						V40250	25-24	3007-022			
						V40260	26-25	3007-023			

ER Spring Collet Chuck System

SUPER ULTRA PRECISION TYPE



DIMENSIONS

TYPE	D	H
ER08	8.5	13.5
ER11	11.5	18
ER16	17	27
ER20	21	31
ER25	26	35
ER32	33	40
ER40	41	46
ER50	52	60

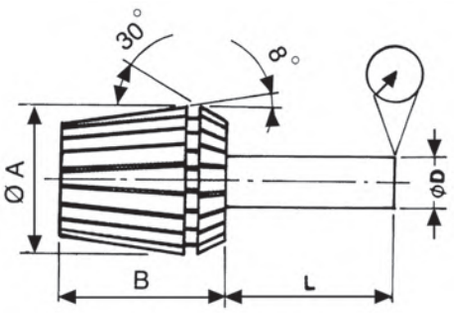
S GRADE Accuracy

L(mm)	øD(mm)	Ultra Precision(MM)
6	1.0-1.4	0.01
10	1.5-2.9	0.01
16	3.0-5.9	0.01
25	6.0-9.9	0.01
40	10.0-17.9	0.01
50	18.0-26.9	0.01
60	27.0-34.9	0.01

TYPE	ER-8			ER-11			ER-16			ER-20		
COMPLET SET	9PCS/SET			7PCS/SET			10PCS/SET			12PCS/SET		
FULL SET	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.
	V08000S	0.5-5.0	3000-001	V11000S	0.5-7.0	3000-002	V16000S	0.5-10.0	3000-003	V20000S	1-13	3000-004
INDIVIDUAL UNIT	V08010S	1.0-0.5	3000-010	V11010S	1.0-0.5	3000-020	V16010S	1.0-0.5	3000-040	V20020S	2-1	3000-060
	V08015S	1.5-1.0	3000-011	V11020S	2.0-1.5	3000-021	V16020S	2.0-1.0	3000-041	V20030S	3-2	3000-061
	V08020S	2.0-1.5	3000-012	V11030S	3.0-2.5	3000-022	V16030S	3.0-2.0	3000-042	V20040S	4-3	3000-062
	V08025S	2.5-2.0	3000-013	V11040S	4.0-3.5	3000-023	V16040S	4.0-3.0	3000-043	V20050S	5-4	3000-063
	V08030S	3.0-2.5	3000-014	V11050S	5.0-4.5	3000-024	V16050S	5.0-4.0	3000-044	V20060S	6-5	3000-064
	V08035S	3.5-3.0	3000-015	V11060S	6.0-5.5	3000-025	V16060S	6.0-5.0	3000-045	V20070S	7-6	3000-065
	V08040S	4.0-3.5	3000-016	V11070S	7.0-6.5	3000-026	V16070S	7.0-6.0	3000-046	V20080S	8-7	3000-066
	V08045S	4.5-4.0	3000-017	V11015S	1.5	3000-027	V16080S	8.0-7.0	3000-047	V20090S	9-8	3000-067
	V08050S	5.0-4.5	3000-018	V11025S	2.5	3000-028	V16090S	9.0-8.0	3000-048	V20100S	10-9	3000-068
				V11035S	3.5	3000-029	V16100S	10.0-9.0	3000-049	V20110S	11-10	3000-069
				V11045S	4.5	3000-030	V16015S	1.5	3000-050	V20120S	12-11	3000-070
				V11055S	5.5	3000-031	V16025S	2.5	3000-051	V20130S	13-12	3000-071
				V11065S	6.5	3000-032	V16035S	3.5	3000-052	V20010S	1.0	3000-072
							V16045S	4.5	3000-053	V20025S	2.5	3000-073
							V16055S	5.5	3000-054	V20035S	3.5	3000-074
							V16065S	6.5	3000-055	V20045S	4.5	3000-075
							V16075S	7.5	3000-056	V20055S	5.5	3000-076
							V16085S	8.5	3000-057	V20065S	6.5	3000-077
							V16095S	9.5	3000-058	V20075S	7.5	3000-078
										V20085S	8.5	3000-079
										V20095S	9.5	3000-080
										V20105S	10.5	3000-081
										V20115S	11.5	3000-082
										V20125S	12.5	3000-083

ER Spring Collet Chuck System

SUPER ULTRA PRECISION TYPE



DIMENSIONS

TYPE	D	H
ER08	8.5	13.5
ER11	11.5	18
ER16	17	27
ER20	21	31
ER25	26	35
ER32	33	40
ER40	41	46
ER50	52	60

S GRADE Accuracy

L(mm)	øD(mm)	Ultra Precision(MM)
6	1.0-1.4	0.01
10	1.5-2.9	0.01
16	3.0-5.9	0.01
25	6.0-9.9	0.01
40	10.0-17.9	0.01
50	18.0-26.9	0.01
60	27.0-34.9	0.01

ER-25			ER-32			ER-40			ER-50		
15PCS/SET			18PCS/SET			23PCS/SET			12PCS/SET		
ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.	ORDER NO.	CAP. mm Ø	CODE NO.
V25000S	1-16	3000-005	V32000S	2-20	3000-006	V40000S	3-26	3000-007	V50000S	10-34	3000-008
V25020S	2-1	3000-090	V32030S	3-2	3000-110	V40040S	4-3	3000-130	V50120S	12-10	3000-160
V25030S	3-2	3000-091	V32040S	4-3	3000-111	V40050S	5-4	3000-131	V50140S	14-12	3000-161
V25040S	4-3	3000-092	V32050S	5-4	3000-112	V40060S	6-5	3000-132	V50160S	16-14	3000-162
V25050S	5-4	3000-093	V32060S	6-5	3000-113	V40070S	7-6	3000-133	V50180S	18-16	3000-163
V25060S	6-5	3000-094	V32070S	7-6	3000-114	V40080S	8-7	3000-134	V50200S	20-18	3000-164
V25070S	7-6	3000-095	V32080S	8-7	3000-115	V40090S	9-8	3000-135	V50220S	22-20	3000-165
V25080S	8-7	3000-096	V32090S	9-8	3000-116	V40100S	10-9	3000-136	V50240S	24-22	3000-166
V25090S	9-8	3000-097	V32100S	10-9	3000-117	V40110S	11-10	3000-137	V50260S	26-24	3000-167
V25100S	10-9	3000-098	V32110S	11-10	3000-118	V40120S	12-11	3000-138	V50280S	28-26	3000-168
V25110S	11-10	3000-099	V32120S	12-11	3000-119	V40130S	13-12	3000-139	V50300S	30-28	3000-169
V25120S	12-11	3000-100	V32130S	13-12	3000-120	V40140S	14-13	3000-140	V50320S	32-30	3000-170
V25130S	13-12	3000-101	V32140S	14-13	3000-121	V40150S	15-14	3000-141	V50340S	34-32	3000-171
V25140S	14-13	3000-102	V32150S	15-14	3000-122	V40160S	16-15	3000-142			
V25150S	15-14	3000-103	V32160S	16-15	3000-123	V40170S	17-16	3000-143			
V25160S	16-15	3000-104	V32170S	17-16	3000-124	V40180S	18-17	3000-144			
			V32180S	18-17	3000-125	V40190S	19-18	3000-145			
			V32190S	19-18	3000-126	V40200S	20-19	3000-146			
			V32200S	20-19	3000-127	V40210S	21-20	3000-147			
						V40220S	22-21	3000-148			
						V40230S	23-22	3000-149			
						V40240S	24-23	3000-150			
						V40250S	25-24	3000-151			
						V40260S	26-25	3000-152			

ER Spring Collet Chuck System

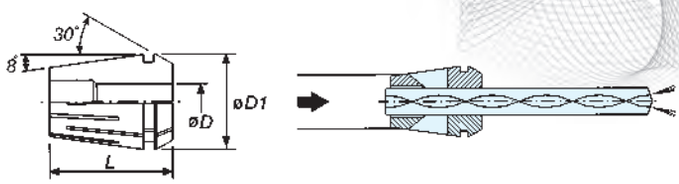
ER COLLET SET STANDARD PRECISION TYPE DIN 6499

COLLET KITS STANDARD TYPE

ORDER NO.	TYPE	COLLET SIZE INSIDE DIA.	PCS/SET	KGS/PACKING	CODE NO.
V-08000	ER-8	1+0.5-5mm(1,1.5,2,2.5,3,3.5,4,4.5,5mm)	9PCS	0.8(C)	3001-101
V-11000	ER-11	1-7mm(1,2,3,4,5,6,7mm)	7PCS	0.3(C)	3002-101
V-11013		1+0.5-7mm(1,1.5,2,2.5,3,3.5,4,4.5,5,5.5,6,6.5,7mm)	13PCS	0.3(C)	3002-102
V-16000	ER-16	1-10mm(1,2,3,4,5,6,7,8,9,10mm)	10PCS	0.7(C)	3003-101
V-16008		3-10mm(3,4,5,6,7,8,9,10mm)	8PCS	0.6(C)	3003-102
V-20000	ER-20	2-13mm(2,3,4,5,6,7,8,9,10,11,12,13mm)	12PCS	0.9(C)	3004-101
V-20008		4-13mm(4,5,6,7,8,9,10,11,12,13mm)	10PCS	0.8(C)	3004-102
V-25000	ER-25	2-16mm(2,3,4,5,6,7,8,9,10,11,12,13,14,15,16mm)	15PCS	1.3(W)	3005-101
V-25008		4-16mm(4,5,6,7,8,9,10,11,12,13,14,15,16mm)	13PCS	1.0(W)	3005-102
V-25009		6,8,10,12,16mm	5PCS	0.4(C)	3005-103
V-25010		4,6,8,10,12,14,16mm	7PCS	0.35(C)	3005-104
V-32000	ER-32	3-20mm(3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20mm)	18PCS	3.3(P)	3006-101
V-32008		4,5,6,8,10,12,13,15,16,18,20mm	11PCS	2.8(C)	3006-102
V-32009		6,8,10,12,16,20mm	6PCS	0.9(C)	3006-103
V-40000	ER-40	4-26mm(4,5,6,7,8,9,10,11,12,13,14,15, 16,17,18,19,20,21,22,23,24,25,26mm)	23PCS	6.5(P)	3007-101
V-40008		4,5,6,8,10,12,13,15,16,18,20,21,22,25,26mm	15PCS	4.2(P)	3007-102
V-40009		6,8,10,12,16,20,25mm	7PCS	2.0(P)	3007-103
V-50000	ER-50	12,14,16,18,20,22,24,26,28,30,32,34mm	12PCS	6.5(W)	3008-101

ER-Type Coolant Collet

Coolant Collet



THE SLOT WITH RUBBER FOR WATER RESIST.
THE OTHER ARE BY UNTHROUGH SLOT TYPE FOR WATER RESIST.

TYPE:ER-16

ORDER NO.	CAP.mmØ	CODE NO.
V16040L	4.0-3.0	3000-200
V16050L	5.0-4.0	3000-201
V16060L	6.0-5.0	3000-202
V16070L	7.0-6.0	3000-203
V16080L	8.0-7.0	3000-204
V16090L	9.0-8.0	3000-205
V16100L	10.0-9.0	3000-206

TYPE:ER-20

ORDER NO.	CAP.mmØ	CODE NO.
V20040L	4-3	3000-210
V20050L	5-4	3000-211
V20060L	6-5	3000-212
V20070L	7-6	3000-213
V20080L	8-7	3000-214
V20090L	9-8	3000-215
V20100L	10-9	3000-216
V20110L	11-10	3000-217
V20120L	12-11	3000-218
V20130L	13-12	3000-219

TYPE:ER-25

ORDER NO.	CAP.mmØ	CODE NO.
V25040L	4-3	3000-221
V25050L	5-4	3000-222
V25060L	6-5	3000-223
V25070L	7-6	3000-224
V25080L	8-7	3000-225
V25090L	9-8	3000-226
V25100L	10-9	3000-227
V25110L	11-10	3000-228
V25120L	12-11	3000-229
V25130L	13-12	3000-230
V25140L	14-13	3000-231
V25150L	15-14	3000-232
V25160L	16-15	3000-233

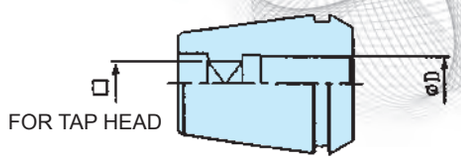
TYPE:ER-32

ORDER NO.	CAP.mmØ	CODE NO.
V32040L	4-3	3000-240
V32050L	5-4	3000-241
V32060L	6-5	3000-242
V32070L	7-6	3000-243
V32080L	8-7	3000-244
V32090L	9-8	3000-245
V32100L	10-9	3000-246
V32110L	11-10	3000-247
V32120L	12-11	3000-248
V32130L	13-12	3000-249
V32140L	14-13	3000-250
V32150L	15-14	3000-251
V32160L	16-15	3000-252
V32170L	17-16	3000-253
V32180L	18-17	3000-254
V32190L	19-18	3000-255
V32200L	20-19	3000-256

TYPE:ER-40

ORDER NO.	CAP.mmØ	CODE NO.
V40040L	4-3	3000-260
V40050L	5-4	3000-261
V40060L	6-5	3000-262
V40070L	7-6	3000-263
V40080L	8-7	3000-264
V40090L	9-8	3000-265
V40100L	10-9	3000-266
V40110L	11-10	3000-267
V40120L	12-11	3000-268
V40130L	13-12	3000-269
V40140L	14-13	3000-270
V40150L	15-14	3000-271
V40160L	16-15	3000-272
V40170L	17-16	3000-273
V40180L	18-17	3000-274
V40190L	19-18	3000-275
V40200L	20-19	3000-276
V40210L	21-20	3000-277
V40220L	22-21	3000-278
V40230L	23-22	3000-279
V40240L	24-23	3000-280
V40250L	25-24	3000-281
V40260L	26-25	3000-282

ER-GB Tap Collets

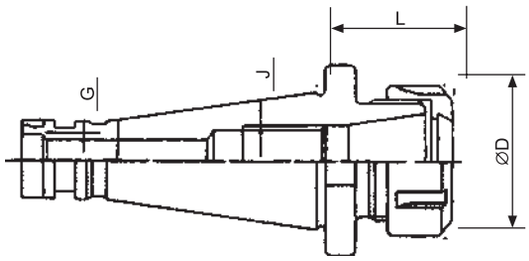


øD mm	□ mm	TAP SIZE		ER16GB	ER20GB	ER25GB	ER32GB	ER40GB
		DIN	JIS	ORDER NO.	ORDER NO.	ORDER NO.	ORDER NO.	ORDER NO.
				CODE NO.	CODE NO.	CODE NO.	CODE NO.	CODE NO.
4.5	3.4	M6		GB160450	GB200450	GB250450	GB320450	
				3000-400	3000-420	3000-440	3000-460	
5	4		M4	GB160500	GB200500	GB250500	GB320500	
				3000-401	3000-421	3000-441	3000-461	
5.5	4.5		M5	GB160550	GB200550	GB250550	GB320550	
				3000-402	3000-422	3000-442	3000-462	
6	4.5		M6 1/4U	GB160600	GB200600	GB250600	GB320600	GB400600
				3000-403	3000-423	3000-443	3000-463	3000-490
6	4.9	M8		GB160601	GB200601	GB250601	GB320601	GB400601
				3000-404	3000-424	3000-444	3000-464	3000-491
6.1	5		5/16U	GB160610	GB200610	GB250610	GB320610	GB400610
				3000-405	3000-425	3000-445	3000-465	3000-492
6.2	5		M8	GB160620	GB200620	GB250620	GB320620	GB400620
				3000-406	3000-426	3000-446	3000-466	3000-493
7	5.5	M10	M10 3/8U	GB160700	GB200700	GB250700	GB320700	GB400700
				3000-407	3000-427	3000-447	3000-467	3000-494
8	6.2		7/16U	GB160800	GB200800	GB250800	GB320800	GB400800
				3000-408	3000-428	3000-448	3000-468	3000-495
8.5	6.5		M12		GB200850	GB250850	GB320850	GB400850
					3000-429	3000-449	3000-469	3000-496
9	7.1	M12	1/2U		GB200900	GB250900	GB320900	GB400900
					3000-430	3000-450	3000-470	3000-497
10	8				GB201000	GB251000	GB321000	GB401000
					3000-431	3000-451	3000-471	3000-498
10.5	8		M14 9/16U			GB251050	GB321050	GB401050
						3000-452	3000-472	3000-499
11	9	M14				GB251100	GB321100	GB401100
						3000-453	3000-473	3000-500
12	9	M16	5/8U			GB251200	GB321200	GB401200
						3000-454	3000-474	3000-501
12.5	10		M16			GB251250	GB321250	GB401250
						3000-455	3000-475	3000-502
14	11	M18	M18 3/4U				GB321400	GB401400
							3000-476	3000-503
15	12		M20				GB321500	GB401500
							3000-477	3000-504
16	12	M20					GB321600	GB401600
							3000-478	3000-505
17	13		M22 7/8U				GB321700	GB401700
							3000-479	3000-506
18	14.5	M22						GB401800
								3000-507
19	15		M24					GB401900
								3000-508
20	15		M27 1"U					GB402000
								3000-509
20	16	M27						GB402001
								3000-510
22	18	M30						GB402200
								3000-511

ER Spring Collet Chuck System

Collet Chuck Kit Whit ISO Taper Shank

DIN 2080/ISO SHANK
DIN 6499



ORDER NO.	TAPER	COLLET TYPE	L	D	G	WEIGHT KGS	CODE NO.
V-101	NT-30	ER-32	55	50	1/2″-12W, M12X1.75P (USA 1/2″-UNC13)	0.7	3020-301
V-102		ER-40	70	63		1.1	3020-302
V-103	NT-40	ER-32	50	60	5/8″-11W or M16X2.0P	1.1	3021-301
V-104		ER-40	60	63		1.3	3021-302
V-105		ER-50	80	78		2	3021-303
V-106	NT-50	ER-32	60	50	1″-8W or M24X3.0P	3.1	3022-301
V-107		ER-40	65	63		3.4	3022-302
V-108		ER-50	65	78		4	3022-303
※ **V-109**	NT-30	ER-25	55	42	1/2″-12W, M12X1.75P	0.7	3020-303
※ **V-110**	NT-40	ER-25	50	42	5/8″-11W, M16X2.0P	1.1	3023-304

Collet Chuck kit With ISO Taper Shank

Including shank, full set of collets, wrench and case.

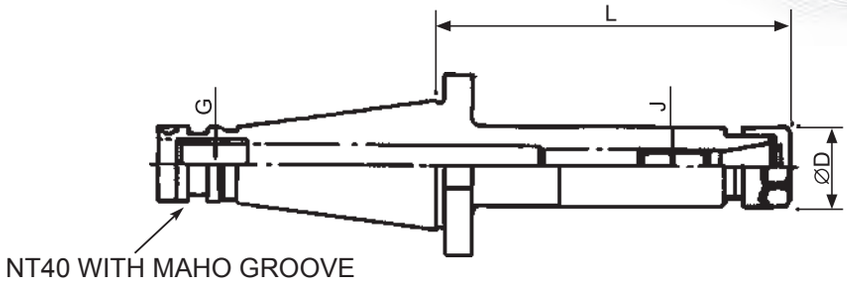
Caution:

Please notify the taper size, collte type, set range, and set numbers when ordering.

ORDER NO.	TAPER	COLLET TYPE	SET RANGE	SET PCS	WEIGHT KGS	CODE NO.
V-201	NT-30	ER-32	3-20	18	4.2	3020-401
V-202			4-20	11	3.2	3020-402
V-203			6-20	6	2.8	3020-403
V-204	NT-30	ER-40	4-26	23	7.3	3020-404
V-205			4-26	15	6	3020-405
V-206			6-25	7	4.6	3020-406
V-207	NT-40	ER-32	3-20	18	4.8	3021-401
V-208			4-20	11	3.8	3021-402
V-209			6-20	6	3.4	3021-403
V-210	NT-40	ER-40	4-26	23	8.2	3021-404
V-211			4-26	15	6.9	3021-405
V-212			6-25	7	5.2	3021-406
V-213	NT-40	ER-50	12-34	12	10	3021-407
V-214	NT-50	ER-32	3-20	18	6.4	3022-401
V-215			4-20	11	5.4	3022-402
V-216			6-20	6	5.5	3022-403
V-217	NT-50	ER-40	4-26	23	9.8	3022-404
V-218			4-26	15	8.5	3022-405
V-219			6-25	7	7	3022-406
V-220	NT-50	ER-50	12-34	12	11	3022-407
※ **V-223**	NT-30	ER-25	2-16	7	2.8	3020-407
※ **V-224**			4-16	15	2.4	3020-408
※ **V-225**	NT-40	ER-25	2-16	7	3.3	3021-409
※ **V-226**			4-16	15	3.0	3021-410

ER Spring Collet Chuck System

Extended Collet Holder With ISO Shank DIN 6499
DIN 2080/ISO SHANK EXTENDED CHUCK



ORDER NO.	TAPER	COLLET TYPE	L	D	G	WEIGHT KG	CODE NO.
V-231	NT-30	ER-16	76	28	1/2″-12W, M12X1.75P (USA 1/2″-UNC13)	0.6	3020-304
V-232	NT-40	ER-16	76	28	5/8″-11W or M16X2.0P	1.1	3021-314
V-233		ER-16	100	28		1.2	3021-305
V-234		ER-20	76	34		1.2	3021-306
V-235		ER-20	100	34		1.4	3021-307

Extended Collet Chuck Kit With ISO Shank

Including shank, full set of collets, wrench and case

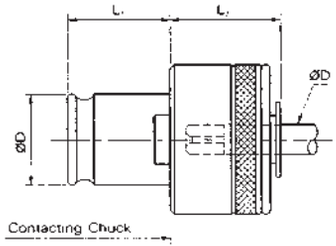
Caution:

Please notify the taper size, collte type, set range, and set numbers when ordering.

ORDER NO.	TAPER	COLLET TYPE	RANGE	PCS/SET	L	WEIGHT KGS	CODE NO.
V-241	NT-30	ER-16	1-10	10	76	1.9	3020-409
V-242			3-10	8		1.8	3020-410
V-242A		ER-20	2-13	12		1.8	3020-411
V-243	NT-40	ER-16	1-10	10	76	2.2	3021-411
V-244			3-10	8		2.1	3021-412
V-245		ER-16	1-10	10	100	2.4	3021-413
V-246			3-10	8		2.3	3021-414
V-247		ER-20	2-13	12	76	2.3	3021-415
V-248			4-13	10		2.2	3021-416
V-249		ER-20	2-13	12	100	2.6	3021-417
V-250			4-13	10		2.5	3021-418

Quick Change Tapping Chucks

QUICK CHANGE TAP COLLETS
(with overload clutch)



- Torque is factory-set to protect the tap for which a particular collet is designed. Small adjustments can be made by a trained user to accomodate tap strength and material variations.
- Collet stops driving when set torque is exceeded.
- A collet is necessary for each tap shank diameter.

JIS SYSTEM SIZE

1PC≒0.18kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC 312 (#1)	M3	4	3.2	19	22	25	**312-01**	3404-200
	M4	5	4				**312-02**	3404-201
	M5	5.5	4.5				**312-03**	3404-202
	M6	6	4.5				**312-04**	3404-203
	M7	6.2	5				**312-05**	3404-204
	M8	6.2	5				**312-06**	3404-205
	M9	7	5.5				**312-07**	3404-206
	M10	7	5.5				**312-08**	3404-207
	M11	8	6				**-312-09**	3404-208
	M12	8.5	6.5				**312-10**	3404-209
	•M14	10.5	8				**•312-11**	3404-210
	•M15	10.5	8				**•312-12**	3404-211
	UNC 1/4	6	4.5				**312-13**	3404-212
	UNC 5/16	6.1	5				**-312-14**	3404-213
	UNC 3/8	7	5.5				**312-15**	3404-214
	UNC 7/16	8	6				**312-16**	3404-215
	UNC 1/2	9	7				**312-17**	3404-216
	•UNC 9/16	10.5	8				**•312-18**	3404-217
	PT 1/8	8	6				**312-19**	3404-218
	PT 1/4	11	9				**312-20**	3404-219

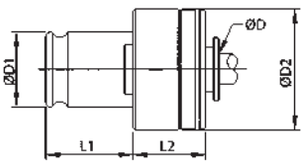
1PC≒0.6kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC 820 (#2)	M7	6.2	5	31	36	30.5	**820-01**	3404-230
	M8	6.2	5				**820-02**	3404-231
	M9	7	5.5				**820-03**	3404-232
	M10	7	5.5				**820-04**	3404-233
	M11	8	6				**820-05**	3404-234
	M12	8.5	6.5				**820-06**	3404-235
	M14	10.5	8				**820-07**	3404-226
	M15	10.5	8				**820-08**	3404-237
	M16	12.5	10				**820-09**	3404-238
	M17	13	10				**820-10**	3404-239
	M18	14	11				**820-11**	3404-240
	M20	15	12				**820-12**	3404-241
	M22	17	13				**820-13**	3404-242
	UNC 3/8	7	5.5				**820-14**	3404-243
	UNC 7/16	8	6				**820-15**	3404-244
	UNC 1/2	9	7				**820-16**	3404-245
	UNC 9/16	10.5	8				**820-17**	3404-246
	UNC 5/8	12	9				**820-18**	3404-247
	UNC 3/4	14	11				**820-19**	3404-248
	UNC 7/8	17	13				**820-20**	3404-249
	PT 1/8	8	6				**820-21**	3404-250
	PT 1/4	11	9				**820-22**	3404-251
	PT 3/8	14	11				**820-23**	3404-252
	PT 1/2	18	14				**820-24**	3404-253
	M24	19	15				**820-25**	3404-254

1PC≒1.8kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC 1433 (#3)	M14	10.5	8	48	56	45	**1433-01**	3404-260
	M15	10.5	8				**1433-02**	3404-261
	M16	12.5	10				**1433-03**	3404-262
	M17	13	10				**1433-04**	3404-263
	M18	14	11				**1433-05**	3404-264
	M20	15	12				**1433-06**	3404-265
	M22	17	13				**1433-07**	3404-266
	M24	19	15				**1433-08**	3404-267
	M25	19	15				**1433-09**	3404-268
	M26	20	15				**1433-10**	3404-269
	M27	20	15				**1433-11**	3404-270
	M28	21	17				**1433-12**	3404-271
	M30	23	17				**1433-13**	3404-272
	M32	24	19				**1433-14**	3404-273
	M33	25	19				**1433-15**	3404-274
	M34	26	21				**1433-16**	3404-275
	M35	26	21				**1433-17**	3404-276
	M36	28	21				**1433-18**	3404-277
	UNC 9/16	10.5	8				**V433-19**	3404-278
	UNC 5/8	12	9				**1433-20**	3404-279
	UNC 3/4	14	11				**1433-21**	3404-280
	UNC 7/8	17	13				**1433-22**	3404-281
	UNC 1	20	15				**1433-23**	3404-282
	UNC 1 1/8	22	17				**1433-24**	3404-283
	UNC 1 1/4	24	19				**1433-25**	3404-284
	UNC 1 3/8	26	21				**1433-26**	3404-285
	UNC 1/4	11	9				**1433-27**	3404-286
	PT 3/8	14	11				**1433-28**	3404-287
	PT 1/2	18	14				**1433-29**	3404-288
	PT 3/4	23	17				**1433-30**	3404-289
	PT 1	26	21				**1433-31**	3404-290

Quick Change Tapping Chucks



- Torque is factory-set to protect the tap for which a particular collet is designed. Small adjustments can be made by a trained user to accomodate tap strength and material variations.
- Collet stops driving when set torque is exceeded.
- A collet is necessary for each tap shank diameter.

DIN 371 Type

ORDER NO.	Size	TC312 DIN 371 Tap	Tap Shank ØD	Tap Shank □	Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
312-01D	TC 312 DIN 371	M1~M1.8	2.5	2.1	M3~M14	22.5	25	19	32	3404-501
312-02D		M2~M2.5	2.8	2.1						3404-502
312-03D		M3	3.5	2.7						3404-503
312-04D		M3.5	4.0	3.0						3404-504
312-05D		M4	4.5	3.4						3404-505
312-06D		M4.5	6.0	4.9						3404-506
312-07D		M5	6.0	4.9						3404-507
312-08D		M6	6.0	4.9						3404-508
312-09D		M8	8.0	6.2						3404-509
312-10D		M10	10.0	8.0						3404-510

ORDER NO.	Size	TC820 DIN 371 Tap	Tap Shank ØD	Tap Shank □	Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
820-01D	TC 820 DIN 371	M5	6.0	4.9	M8~M24	35	30.5	31	50	3404-521
820-02D		M6	6.0	4.9						3404-522
820-03D		M8	8.0	6.2						3404-523
820-04D		M10	10.0	8.0						3404-524

*Custom-built products are available on request.

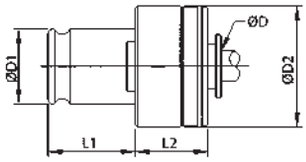
DIN 376 Type

ORDER NO.	Size	TC312 DIN 376 Tap	Tap Shank ØD	Tap Shank □	Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
312-21D	TC 312 DIN 376	M3.5	2.5	2.1	M3~M14	22.5	25	19	32	3404-531
312-22D		M4	2.8	2.1						3404-532
312-23D		M4.5	3.5	2.7						3404-533
312-24D		M5	3.5	2.7						3404-534
312-25D		M6	4.5	3.4						3404-535
312-26D		M7	5.5	4.3						3404-536
312-27D		M8	6.0	4.9						3404-537
312-28D		M10	7.0	5.5						3404-538
312-29D		M12	9.0	7.0						3404-539
312-30D		M14	11.0	9.0						3404-540
312-31D		M16	12.0	9.0						3404-541

ORDER NO.	Size	TC820 DIN 376 Tap	Tap Shank ØD	Tap Shank □	Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
820-21D	TC 820 DIN 376	M8	6.0	4.9	M8~M24	35	30.5	31	50	3404-551
820-22D		M10	7.0	5.5						3404-552
820-23D		M12	9.0	7.0						3404-553
820-24D		M14	11.0	9.0						3404-554
820-25D		M16	12.0	9.0						3404-555
820-26D		M18	14.0	11.0						3404-556
820-27D		M20	16.0	12.0						3404-557
820-28D		M22	18.0	14.5						3404-558
820-29D		M24	18.0	14.5						3404-559

ORDER NO.	Size	TC1433 DIN 376 Tap	Tap Shank ØD	Tap Shank □	Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
1433-01D	TC 1433 DIN 376	M14	11.0	9.0	M14~M36	55.5	45	48	72	3404-571
1433-02D		M16	12.0	9.0						3404-572
1433-03D		M18	14.0	11.0						3404-573
1433-04D		M20	16.0	12.0						3404-574
1433-05D		M22	18.0	14.5						3404-575
1433-06D		M24	18.0	14.5						3404-576
1433-07D		M27	20.0	16.0						3404-577
1433-08D		M30	22.0	18.0						3404-578
1433-09D		M33	25.0	20.0						3404-579
1433-10D		M36	28.0	22.0						3404-580

Quick Change Tapping Chucks



ISO 529 Type

ORDER NO.	Size	TC312 ISO 529 Tap	Tap Shank		Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
			ØD	□						
312-01I	TC 312 ISO 529	M1~M2	2.5	2.0	M3~M14	22.5	25	19	32	3404-601
312-02I		M2.2~M2.5	2.8	2.24						3404-602
312-03I		M3	3.15	2.5						3404-603
312-04I		M3.5	3.55	2.8						3404-604
312-05I		M4	4.0	3.15						3404-605
312-06I		M4.5	4.5	3.55						3404-606
312-07I		M5	5.0	4.0						3404-607
312-08I		M6	6.3	5.0						3404-608
312-09I		M7	7.1	5.6						3404-609
312-10I		M8	8.0	6.3						3404-610
312-11I		M9	9.0	7.1						3404-611
312-12I		M10	10.0	8.0						3404-612

ORDER NO.	Size	TC820 ISO 529 Tap	Tap Shank		Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
			ØD	□						
820-01I	TC 820 ISO 529	M6	6.3	5.0	M8~M24	35	30.5	31	50	3404-621
820-02I		M7	7.1	5.6						3404-622
820-03I		M8	8.0	6.3						3404-623
820-04I		M9	9.0	7.1						3404-624
820-05I		M10	10.0	8.0						3404-625

*Custom-built products are available on request.

ISO 529/2283 Type

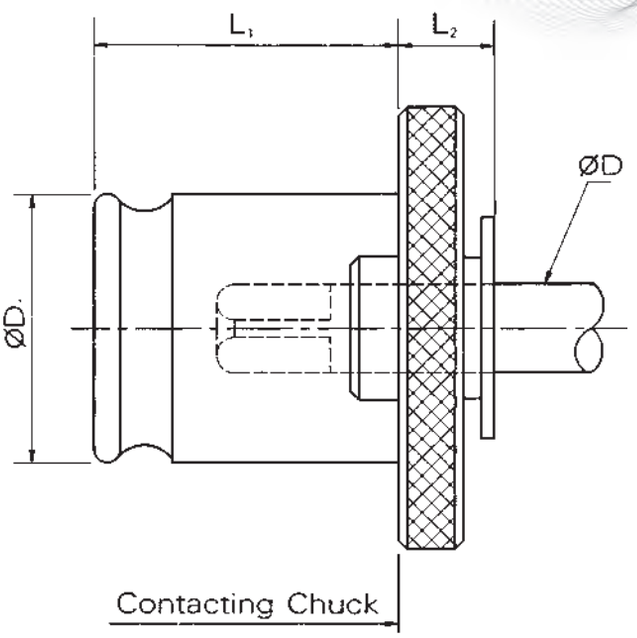
ORDER NO.	Size	TC312 ISO 529/2283 Tap	Tap Shank		Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
			ØD	□						
312-21I	TC 312 ISO 529/2283	M3	2.24	1.8	M3~M14	22.5	25	19	32	3404-631
312-22I		M3.5	2.5	2.0						3404-632
312-23I		M4	3.15	2.5						3404-633
312-24I		M4.5	3.55	2.8						3404-634
312-25I		M5	4.0	3.15						3404-635
312-26I		M6	4.5	3.55						3404-636
312-27I		M7	5.6	4.5						3404-637
312-28I		M8	6.3	5.0						3404-638
312-29I		M9	7.1	5.6						3404-639
312-30I		M10	8.0	6.3						3404-640
312-31I		M12	9.0	7.1						3404-641
312-32I		M14	11.2	9.0						3404-642

ORDER NO.	Size	TC820 ISO 529/2283 Tap	Tap Shank		Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
			ØD	□						
820-21I	TC 820 ISO 529/2283	M8	6.3	5.0	M8~M24	35	30.5	31	50	3404-651
820-22I		M9	7.1	5.6						3404-652
820-23I		M10	8.0	6.3						3404-653
820-24I		M12	9.0	7.1						3404-654
820-25I		M14	11.2	9.0						3404-655
820-26I		M16	12.5	10.0						3404-656
820-27I		M18	14.0	11.2						3404-657
820-29I		M20	14.0	11.2						3404-658
820-30I		M22	16.0	12.5						3404-659
820-31I		M24	18.0	14.0						3404-660

ORDER NO.	Size	TC1433 ISO 529/2283 Tap	Tap Shank		Capacity	L1 (m/m)	L2 (m/m)	ØD1 (m/m)	ØD2 (m/m)	CODE NO.
			ØD	□						
1433-01I	TC 1433 ISO 529/2283	M14	11.2	9.0	M14~M36	55.5	45	48	72	3404-671
1433-02I		M16	12.5	10.0						3404-672
1433-03I		M18	14.0	11.2						3404-673
1433-04I		M20	14.0	11.2						3404-674
1433-05I		M22	16.0	12.5						3404-675
1433-06I		M24	18.0	14.0						3404-676
1433-07I		M27	20.0	16.0						3404-677
1433-08I		M30	20.0	16.0						3404-678
1433-09I		M33	22.4	18.0						3404-679
1433-10I		M36	25.0	20.0						3404-680

Quick Change Tapping Chucks

QUICK CHANGE TAP COLLETS
(without overload clutch)



JIS SYSTEM SIZE

1PC≒0.08kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC312B (#1)	M3	4	3.2	19	21.5	7	**312B-01**	3404-300
	M4	5	4				**312B-02**	3404-301
	M5	5.5	4.5				**312B-03**	3404-302
	M6	6	4.5				**312B-04**	3404-303
	UNC 5/16	6.1	5				**312B-05**	3404-304
	M7/M8	6.2	5				**312B-06**	3404-305
	M9/M10	7	5.5				**312B-07**	3404-306
	M11	8	6				**312B-08**	3404-307
	M12	8.5	6.5				**312B-09**	3404-308
	UNC 1/2	9	7				**312B-10**	3404-309
	M14	10.5	8				**312B-11**	3404-310
	PT 1/4	11	9				**312B-20**	3404-311

1PC≒0.28kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC820B (#2)	M7/M8	6.2	5	31	35	11	**820B-01**	3404-330
	M9/M10	7	5.5				**820B-02**	3404-331
	M11	8	6				**820B-03**	3404-332
	M12	8.5	6.5				**820B-04**	3404-333
	UNC 1/2	9	7				**820B-05**	3404-334
	M14	10.5	8				**820B-06**	3404-335
	PT 1/4	11	9				**820B-07**	3404-336
	UNC 5/8	12	9				**820B-08**	3404-337
	M16	12.5	10				**820B-09**	3404-338
	M17	13	10				**820B-10**	3404-339
	M18	14	11				**820B-11**	3404-340
	M20	15	12				**820B-12**	3404-341
	M22	17	13				**820B-13**	3404-342
	PT 1/2	18	14				**820B-14**	3404-343

- A collet is necessary for each tap shank diameter.

1PC≒0.8kg

Size	Thread	Tap Shank ØD	Tap Shank □	Ø D1	L1	L2	ORDER NO.	CODE NO.
TC1433B (#3)	M14/M15	10.5	8	48	55.5	14	**1433B-01**	3404-360
	PT 1/4	11	9				**1433B-02**	3404-361
	UNC 5/8	12	9				**1433B-03**	3404-362
	M16	12.5	10				**1433B-04**	3404-363
	M17	13	10				**1433B-05**	3404-364
	M18	14	11				**1433B-06**	3404-365
	M20	15	12				**1433B-07**	3404-366
	M22	17	13				**1433B-08**	3404-367
	PT 1/2	18	14				**1433B-09**	3404-368
	M24/M25	19	15				**1433B-10**	3404-369
	M26/M27	20	15				**1433B-11**	3404-370
	M28	21	17				**1433B-12**	3404-371
	UNC 11/8	22	17				**1433B-13**	3404-372
	M30	23	17				**1433B-14**	3404-373
	M32	24	19				**1433B-15**	3404-374
	M33	25	19				**1433B-16**	3404-375
	M34/M35	26	21				**1433B-17**	3404-376
	M36/M38	28	21				**1433B-18**	3404-377

Tap Shank Dimensions

For Tapping Chuck

FOR TAP	JIS		ISO		DIN 371		DIN 376	
Thread	Ød	□	Ød	□	Ød	□	Ød	□
M3	4	3.2	3.15	2.5	3.5	2.7	2.2	-
M4	5	4	4	3.15	4.5	3.4	2.8	2.1
M5	5.5	4.5	5	4	6	4.9	3.5	2.7
M6	6	4.5	6.3	5	6	4.9	4.5	3.4
M8	6.2	5	8	6.3	8	6.2	6	4.9
M10	7	5.5	10	8	10	8	7	5.5
M12	8.5	6.5	9	7.1			9	7
M14	10.5	8	11.2	9			11	9
M16	12.5	10	12.5	10			12	9
M18	14	11	14	11.2			14	11
M20	15	12	14	11.2			16	12
M22	17	13	16	12.5			18	14.5
M24	19	15	18	14			18	14.5
M27	20	15	20	16			20	16
M30	23	17	20	16			22	18
PT 1/8	8	6						
PT 1/4	11	9						
PT 3/8	14	11						
PT 1/2	18	14						
PT 5/8	20	15						
PT 3/4	2	17						

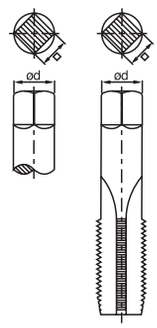
FOR TAP	JIS		ISO		DIN 371		DIN 376	
Thread	Ød	□	Ød	□	Ød	□	Ød	□
W 1/8″	4	3.2						
W 3/16″	5.5	4.5						
W 1/4″	6	4.5						
W 5/16″	6.1	5						
W 3/8″	7	5.5						
W 7/16″	8	6						
W 1/2″	9	7						
W 5/8″	12	9						
W 3/4″	14	11						
W 7/8″	17	13						
W 1″	20	15						

JIS STANDARD

METRIC THREAD	INCH THREAD	Ød	□
M3	W 1/8	4	3.2
M4 M4.5		5	4
M5 M5.5		5.5	4.5
M6	W 1/4	6	4.5
	W 5/16	6.1	5
M8 M7		6.2	5
M10 M9	W 3/8	7	5.5
M11	W 7/16	8	6
M12		8.5	6.5
	W 1/2	9	7
M14 M15	W 9/16	10.5	8
	W 5/8	12	9
M16		12.5	10
M17		13	10
M18	W 3/4	14	11
M20		15	12
M22	W 7/8	17	13
M24 M25		19	15
M27 M26	W1	20	15
M28		21	17
	W 1-1/8	22	17
M30		23	17
M32	W1-1/4	24	19
M33		25	19
M35 M34	W1-3/8	26	21
M36 M38		28	21
M39 M40	W1-1/2	30	23
M42	W1-5/8	32	26
M45	W1-3/4	35	26
M48	W1-7/8	38	29

JIS STANDARD PIPE THREAD

PT	PS	PF	Ød	□
1/8	1/8	1/8	8	6
1/4	1/4	1/4	11	9
3/8	3/8	3/8	14	11
1/2	1/2	1/2	18	14
		5/8	19	15
3/4	3/4	3/4	23	17
		7/8	24	19
1	1	1	26	21
	1 - 1/8	1 - 1/8	28	21
1 - 1/4	1 - 1/4	1 - 1/4	32	26
1 - 3/8	1 - 3/8	1 - 3/8	35	26
1 - 1/2	1 - 1/2	1 - 1/2	38	29



Mini Type Arm Type Air Tapping Unit

HIGH TORQUE HIGH EFFICENCY EASY OPERATION

ACCESSORIES

- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- Choose any six safety clutch tapping adapters
- Radial jib
- Without stand plate
- Air pressure: 6~8 kgs/cm^3
- VAT-08/12 series require: 5HP compressor
- VAT-16/20 series require: 10HP compressor

ORDER NO.	VAT-708	VAT-712	VAT-716
For Tap	M3~M8	M5~M12	M8~M16
	TC-312	TC-312	TC-820
Speed (rpm)	630/700	350/400	250
Weight (kgs)	13.2	13.1	17.3
Work Range	Rmax 700mm		
CODE NO.	3404-410	3404-411	3404-412

Small Arm Type Air Tapping Unit

HIGH TORQUE HIGH EFFICENCY EASY OPERATION

ACCESSORIES

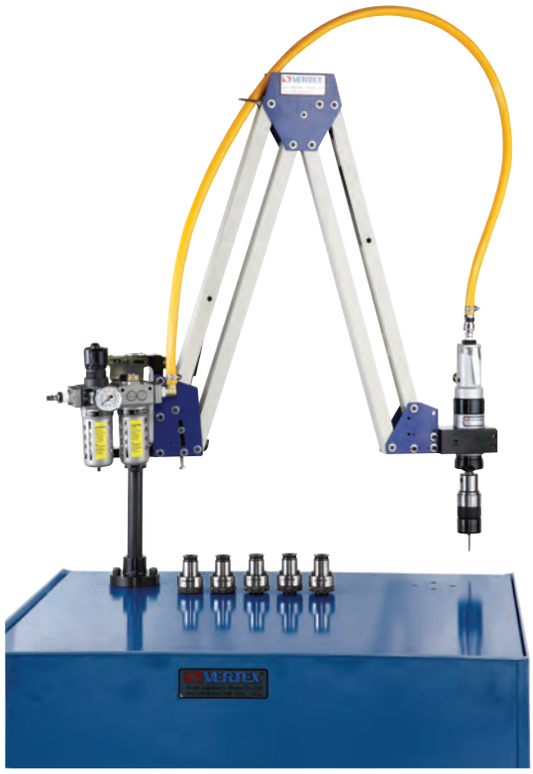
- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- Choose any six safety clutch tapping adapters
- Radial jib, increases arm reach by 500mm
- Without stand plate
- Air pressure: 6~8 kgs/cm^3
- VAT-08/12 series require: 5HP compressor
- VAT-16/20 series require: 10HP compressor

ORDER NO.	VAT-1408	VAT-1412	VAT-1416
For Tap	M3~M8	M5~M12	M8~M16
	TC-312	TC-312	TC-820
Speed (rpm)	700	400	250
Weight (kgs)	18.2	18.2	24.6
Work Range	Rmax 1400mm		
	Rmin 200mm		
CODE NO.	3404-415	3404-416	3404-417

Arm Type Air Tapping Unit

HIGH TORQUE HIGH EFFICENCY EASY OPERATION

WORK RANGE 1600X500m/m RMAX. X MIN.



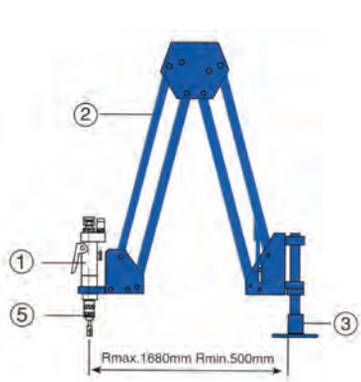
VAT-1608/1612/1616

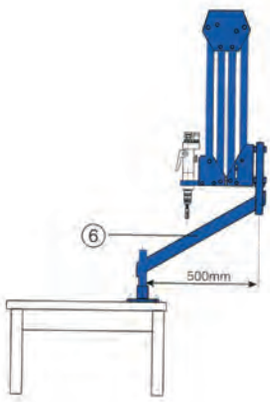
To solve all tapping problems

- Rapid positoning and high machining speed increase productivity.
- Lower tap damage rate, high thread accuracy.
- Tap shall never break for tapping through-hole or blind-hole.
- Tapping for heavier workpiece requires neither positioning equipments nor movement or large work area.
- Lower machining cost than that by CNC maghine, drilling machine or manual tapping operation.
- Drilling to max: 6mm diameter
- Easy operation, no experience or strength required.
- Without stand plate.
- Air pressure: 6~8 kgs/cm^3
- VAT-08/12 series require: 5HP compressor
- VAT-16/20 series require: 10HP compressor

VAT-1908/1912/1916

WORK RANGE 1900X200m/m RMAX. X RMIN.





ORDER NO.	VAT-1608	VAT-1612	VAT-1616
For Tap	M3~M8	M5~M12	M8~M16
	TC-312	TC-312	TC-820
Speed (rpm)	700	400	250
Weight (kgs)	16.9	17	21.1
Work Range	Rmax 1600mm		
	Rmin 500mm		
CODE NO.	3404-420	3404-421	3404-422

ORDER NO.	VAT-1908	VAT-1912	VAT-1916
For Tap	M3~M8	M5~M12	M8~M16
	TC-312	TC-312	TC-820
Speed (rpm)	700	400	250
Weight (kgs)	19.7	23.9	23.5
Work Range	Rmax 1900mm		
	Rmin 200mm		
CODE NO.	3404-425	3404-426	3404-427

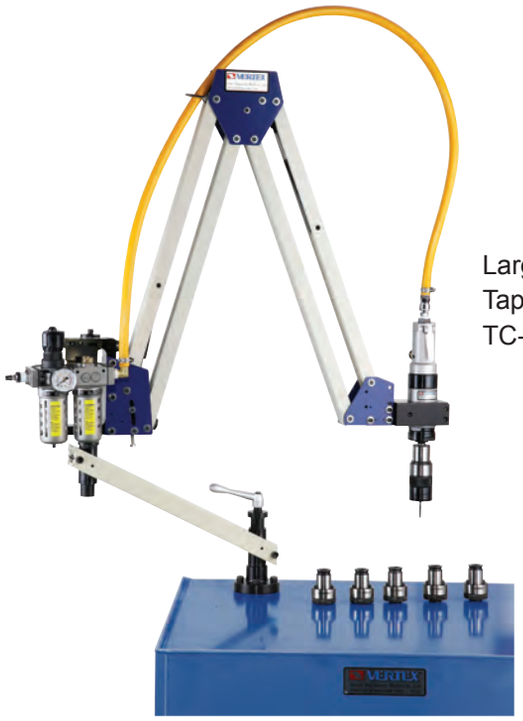
VAT-1608, 1612, 1616 STANDARD ACCESSORIES

- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- Choose any six safety clutch tapping adapters

VAT-1908, 1912, 1916 STANDARD ACCESSORIES

- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- Choose any six safety clutch tapping adapters
- Radial jib, increases arm reach by 500mm

Air Tapping Unit



Large Range Type For
Tap M10~M24,
TC-820

STANDARD ACCESSORIES:

- Air tapping spindle
- Parallel arm
- Table mounting column
- Air combination
- Choose any six safety clutch taping adapters
- Radial jib, increases arm reach by 500mm
- Without stand plate
- Air pressure: 6~8 kgs/cm^3
- VAT-08/12 series require: 5HP compressor
- VAT-16/20 series require: 10HP compressor

ORDER NO.	FOR TAP	SPEED (rpm)	WORK RANGE	WEIGHT (kgs)	CODE NO.
VAT-1920	M10-M20	180/200	Rmax 1900mm Rmin 200 mm	26	3404-430
VAT-1922	M12-M22	185/205			3404-431
VAT-1924	M14-M24	90/100		28	3404-431A

Air Tapping Spindle

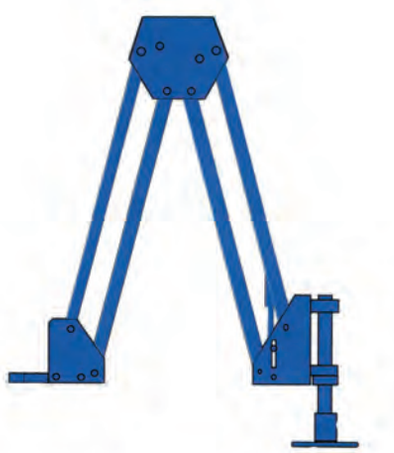
High torque, high efficiency for maching all tapping requirement. Light and handy main shaft design, easy operation.

The required pressure is 6.3kg/cm^2=90 PSI.

- SP08 & SP12 Required 5 HP compressor and more.
- SP16 & SP20 Required 10 HP compressor and more. (must keep the air pressure at 6.3kg/cm^2)

ORDER NO.	TAPPING CAPACITY	SPEED (rpm)	MOUNTING DIA.	CODE NO.
VAT-SP08	M3-M8	630/700	ø38.5 (1 $^1/_2$″)	3404-432
VAT-SP12	M5-M12	350/400	ø38.5 (1 $^1/_2$″)	3404-433
VAT-SP16	M8-M16	230/250	ø61.3 (2 $^{13}/_{32}$″)	3404-434
VAT-SP20	M10-M20	180/200	ø61.3 (2 $^{13}/_{32}$″)	3404-435
VAT-SP22	M12-M22	185/205	ø61.3 (2 $^{13}/_{32}$″)	3404-435A
VAT-SP24	M14-M24	90/100	ø61.3 (2 $^{13}/_{32}$″)	3404-435B

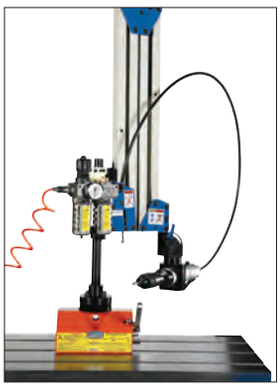
Parallel Arm For Air Tapping Unit

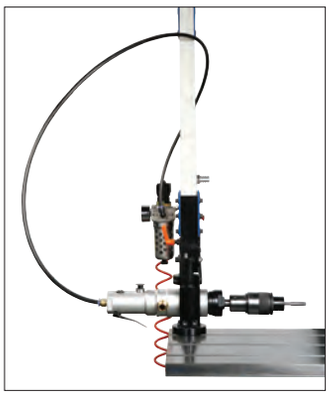


PARALLEL ARM

ORDER NO.	For The Air Tapping Unit	CODE NO.
VAT-ARM700-SP □	VAT-7 08, 7 12, 7 16	3404-436
VAT-ARM1400x200-SP □	VAT-14 08, 14 12, 14 16	3404-437
VAT-ARM1600x500-SP □	VAT-16 08, 16 12, 16 16	3404-438
VAT-ARM1900x200-SP □	VAT-19 08, 19 12, 19 16	3404-439

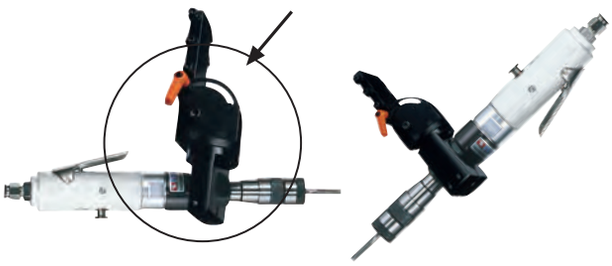
Adjustable Angle Head For Air Tapping Unit





ORDER NO.	FOR VAT-TYPE	WEIGHT (kg)	CODE NO.
AT08-90°	VAT-708 VAT-1608 VAT-1408 VAT-1908	1.1	3404-440
AT12-90°	VAT-712 VAT-1612 VAT-1412 VAT-1912	1.1	3404-441

90° and Universal Degree



ORDER NO.	FOR VAT-TYPE	WEIGHT (kg)	CODE NO.
AT16-90°	VAT-716 VAT-1616 VAT-1416 VAT-1916	1.5	3404-442
AT20-90°	VAT-1920	1.5	3404-443
AT22-90°	VAT-1922	1.5	3404-444
AT24-90°	VAT-1924	1.5	3404-446

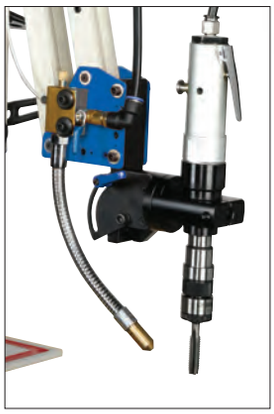
Magnetic Base For Air Tapping Unit

PORTABLE & MOVEABLE AIR TAPPING ARM

ORDER NO.	Magnetic Base		suit For VAT-Type	Weight (kgs)	CODE NO.
	Holding Power	Dimension LXWXH(mm)			
VLM-300A	300kg	155x90x93	VAT-7 □ VAT-14 □ VAT-16 □	9.4	3404-450
VLM-600A	600kg	224x115x120	VAT-1920 VAT-1922	21.9	3404-451

Mist Coolant System For Air Tapping Unit

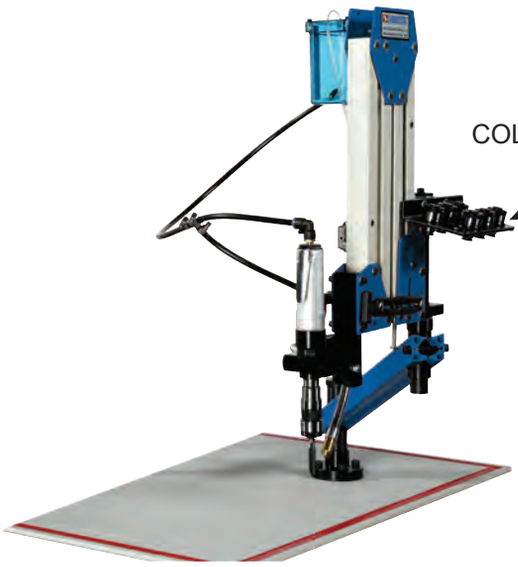
ORDER NO.VAC-08 CODE NO.3404-452 **Without Oil**



ENLARGE THE TAPPER LIFE 50%

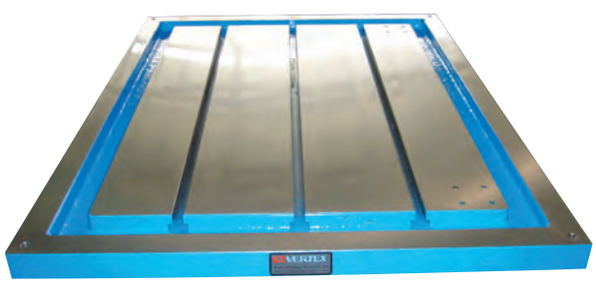
Collet Rack For Air Tapping Unit

ORDER NO.VCR-08 CODE NO.3404-453

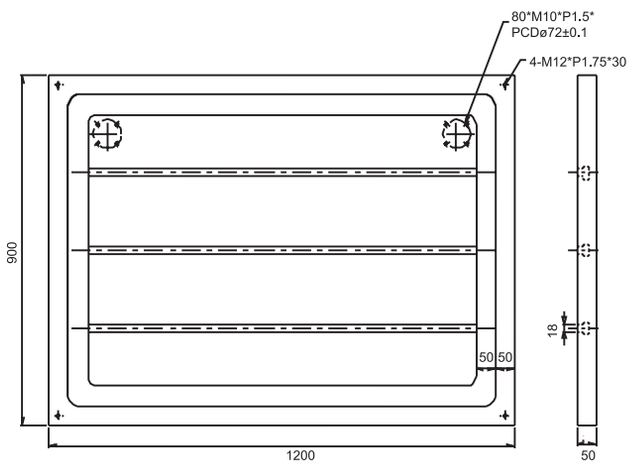


Working Table

ORDER NO.VAT-912T CODE NO.3404-445



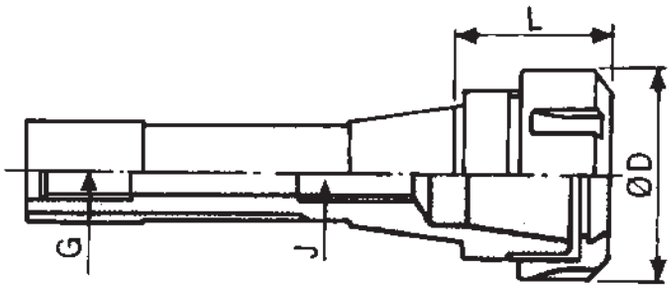
900x1200m/m 340kgs



ER Spring Collet Chuck System

Collet Holders With R-8 shank

R-8 SHANK



ORDER NO.	TAPER	COLLET TYPE	L	D	G	WEIGHT KG	CODE NO.
V-301	R8	ER-16	38	28	7/16″X20 UNF	0.5	3027-301
V-302		ER-32	40	50		0.8	3027-302
V-303		ER-40	70	63		1.3	3027-303

Collet Chuck Kit With R-8 Shank

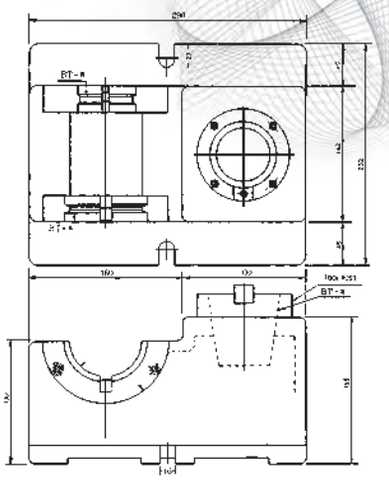
Including shank, full set of collets, wrench and case.
(ER16 no Wrench)

Caution:

Please notify the taper size, collte type, set range, and set numbers when ordering.

ORDER NO.	TAPER	COLLET TYPE	SET RANGE	SET PCS	WEIGHT KGS	CODE NO.
V-311	R8	ER16	1-10	10	1.5(W)	3027-401
V-312			3-10	8	1.45(P)	3027-402
V-313		ER32	3-20	18	4.3(P)	3027-403
V-314			4-20	11	3.2(P)	3027-404
V-315			6-20	6	2.9(P)	3027-405
V-316		ER40	4-26	23	7.3(P)	3027-406
V-317			4-26	15	6.1(P)	3027-407
V-318			6-25	7	4.6(P)	3027-408

Deluxe Type Tool Setting Stand

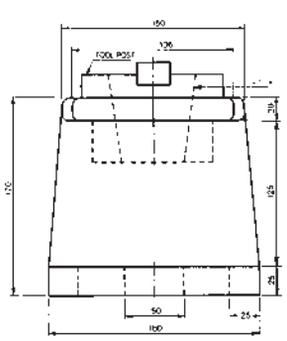


- This tool setting stand is one kind of subsidize tool for helping machine center to work efficiently. To be used fixing the tools on tool holder. It could avoid the method of using draw bar to fix (on machine center). It is safe, and doesn't effect the precision of machine's spindle.
- It's best for using on horizontal or vertical lines, simple & quick operations.
- A multi-function tool, it is changeable, has two kinds of specifications can be used. That is to say, one machine could be used as two sets machines.
- Additional special accessories to make your operating more convenient.
- CAT & SK share same model.

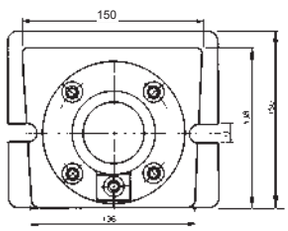
ORDER NO.	SHANK TAPERS		WEIGHT (kgs)	CODE NO.
	TOOL POST	ADAPTER HOLDING		
VTD-1	BT-#40x1	BT-#40x2	22.4	3405-001
VTD-2	BT-#50x1	BT-#50x2	22	3405-002
VTD-3	BT-#50x1	BT-#50x1 BT-#40x1	24	3405-003
VTD-4	BT-#40x1	BT-#50x1 BT-#40x1	24	3405-004
VTD-5	SK-40x1	SK-40x2	26	3405-005
VTD-6	SK-50x1	SK-50x2	24	3405-006
VTD-7	SK-50x1	SK-50x1 SK-40x1	25	3405-007
VTD-8	SK-40x1	SK-50x1 SK-40x1	25	3405-008
VTD-9	BT-30x1	BT-30x2	23	3405-009
VTD-10	SK-30x1	SK-30x2	23	3405-009A

Simple Type Tool Setting Stand

- This tool setting stand is one kind of subsidize tool for helping machine center to work efficiently.
  To be used fixing the tools on tool holder. It could avoid the method of using draw bar to fix (on machine center). It is safe, and doesn't effect the precision of machine's spindle.
- It is simple structive type. And could fix tooling on the above and hold the pull studs on the below of it. This is the excellent helping tools for simple, rapid and safe.



ORDER NO.	SHANK TAPERS	STD	WEIGHT (kg)	CODE NO.
VTS-BT-30	30	BT ISO NT	11.9	3405-010
VTS-BT-40	40		12.4	3405-011
VTS-BT-50	50		11.9	3405-012
VTS-SK-30	30	CAT DIN 69871A	13	3405-013
VTS-SK-40	40		12.4	3405-014
VTS-SK-50	50		12	3405-015



Tool Holder Locking Device

ORDER NO.	STD	WEIGHT (KGS)	CODE NO.
VTG-BT30	ISO BT	4.1	3405-020
VTG-BT40		4.2	3405-021
VTG-BT50		11.8	3405-022
VTG-SK30	CAT SK DIN69871A	3.7	3405-023
VTG-SK40		4	3405-024
VTG-SK50		12.3	3405-025

Tool Holder Locking Device

TILTING TYPE

ORDER NO.	STD	WEIGHT (KGS)	CODE NO.
VTL-BT30	ISO BT	4.2	3405-030
VTL-BT40		4.3	3405-031
VTL-BT50		9.8	3405-032
VTL-SK30	DIN69871A	4	3405-033
VTL-SK40		4	3405-034
VTL-SK50		8	3405-035
VTL-NT30	NT	4.2	3405-036
VTL-NT40		4.3	3405-037
VTL-NT50		9.8	3405-038

Tool Holder Locking Fixtures

HSK TYPE

ORDER NO.	STD	WEIGHT (KGS)	CODE NO.
VTL-HSK40	DIN69893 HSK	2.5	3405-046
VTL-HSK50		3.5	3405-047
VTL-HSK63		4.5	3405-048

End Mill Sheath Rack

ORDER NO.VMS-2 CODE NO.3405-050

Material:ABS
with 62 sheaths.

Unit:mm

CAPACITY RANGE	SIZE	WEIGHT (kg)
Ø6~Ø42	205x205x80	0.4

Spindle Taper Wiper

- Easily and quickly for cleaning spindle hole.
- Plastic body, the taper wiper is made of special cotton material, will not damage the spindle.
- The BT & DIN of taper are same

ORDER NO.	TAPER NO.	TOTAL LENGTH	WEIGHT (kg)	CODE NO.
VTW-30	#30	168mm	0.07	3405-060
VTW-40	#40	185mm	0.08	3405-061
VTW-50	#50	265mm	0.02	3405-062

Spindle Taper Wiper

H Type A Type

ORDER NO.	TAPER NO.	TOTAL LENGTH	WEIGHT (kg)	CODE NO.
VTW-63A	HSK63A	166mm	0.2	3405-070
VTW-50H	HSK50	159mm	0.2	3405-071
VTW-63H	HSK63	167mm	0.2	3405-072

Tooling Carts

653W x 600D x 1460H mm

NEW

Features:

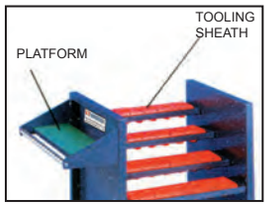
- Equipped with 8 adjustable sheath rack
- Max-load 200kgs
- Front and back 2 sides total allow up to 8 racks.

ORDER NO.	STD	TOOLING SHEATH CAPACITY	RACK	WEIGHT (kgs)	CODE NO.
VTT-1-30	BT-30 DIN 69871A	32 PCS/SET (BT-30)	4 adjustable sheath rack	52.27	3405-097
VTT-1-40	BT-40 DIN 69871A	28 PCS/SET (BT-40)		52.22	3405-098
VTT-1-50	BT-50 DIN 69871A	20 PCS/SET (BT-50)		52.29	3405-099

ORDER NO.	STD	TOOLING SHEATH CAPACITY	RACK	WEIGHT (kgs)	CODE NO.
VTT-1-30A	BT-30 DIN 69871A	64 PCS/SET (BT-30)	8 adjustable sheath rack	63.74	3405-097A
VTT-1-40A	BT-40 DIN 69871A	56 PCS/SET (BT-40)		63.64	3405-098A
VTT-1-50A	BT-50 DIN 69871A	40 PCS/SET (BT-50)		63.78	3405-099A

Tooling Trolleys

ORDER NO.:VTT-2
WEIGHT:51kgs



ORDER NO.	STD	TOOLING SHEATH CAPACITY	CODE NO.
VTT-2-30	BT-30 DIN 69871A	32 PCS/SET	3405-100
VTT-2-40	BT-40 DIN 69871A	28 PCS/SET	3405-101
VTT-2-50	BT-50 DIN 69871A	20 PCS/SET	3405-102

ORDER NO.:VTT-5
WEIGHT:64kgs
WITH 2 DRAWERS

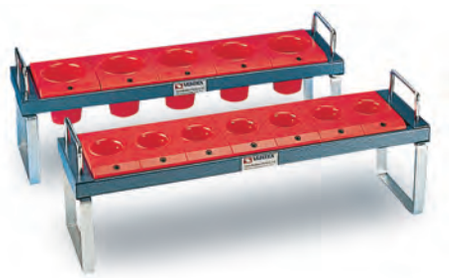
ORDER NO.	STD	TOOLING SHEATH CAPACITY	CODE NO.
VTT-5-30	BT-30 DIN 69871A	32 PCS/SET	3405-110
VTT-5-40	BT-40 DIN 69871A	28 PCS/SET	3405-111
VTT-5-50	BT-50 DIN 69871A	20 PCS/SET	3405-112

ORDER NO.:VTT-6
WEIGHT:53kgs
WITH 1 DRAWERS

ORDER NO.	STD	TOOLING SHEATH CAPACITY	CODE NO.
VTT-6-30	BT-30 DIN 69871A	32 PCS/SET	3405-105
VTT-6-40	BT-40 DIN 69871A	28 PCS/SET	3405-106
VTT-6-50	BT-50 DIN 69871A	20 PCS/SET	3405-107

Tooling Sheath Rack

THE BT & DIN OF TAPER ARE SAME.



SIZE
595mm(L)
143mm(W)
225mm(H)

ORDER NO.	WEIGHT(kgs)	CODE NO.
VTTR-BT-30	3.8	3405-120
VTTR-BT-40	3.7	3405-121
VTTR-BT-50	3.7	3405-122

Tooling Sheath

THE BT & DIN OF TAPER ARE SAME.
ORDER NO.: VTTS-BT-30
WEIGHT:0.077kg
CODE NO. 3405-130
SIZE: 48 X138 X 65mm

ORDER NO.: VTTS-BT-40
WEIGHT:0.085kg
CODE NO. 3405-131
SIZE: 63 X 138X 74mm
ORDER NO.: VTTS-BT-50
WEIGHT:0.123kg
CODE NO. 3405-132
SIZE: 93 X 138X 104mm

Tool Presetter

ORDER NO.TP-3040E CODE NO.3405-400

TP-3040E ECONOMICAL-TYPE TOOL PRESETTER

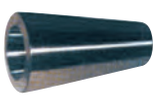
- Z axis is provided the Square Carriage and treated by special scratch.
- The base of X axis is provided the Dove Tail Slot which is grind and treated by special scratch to ensure the durability of parallelism.
- Spindle sizes can be changed by using different sleeves(BT#50,#40, #30) to inspect different sizes of tools. The tool presetter of standard sleeve is BT-50
- The optional sleeve is O.D. BT-50 x I.D. BT-40 and O.D. BT-50 x I.D. BT-30
- Digimatic Readout is provided to display the measuring size.

STANDARD ACCESSORIES

Digimatic Readout (XxZ:200x450m/m)
Test Arbor BT#50(DxL:50x250mm)
Dial Gauge (2 sets) 0.01mm
Protective Dust-Resistance Plastic Cover

OPTIONAL ACCESSORIES

1.SLEEVE



ORDER NO.	SIZE	CODE NO.
S50-40	BT-50XBT-40	3405-410
S50-30	BT-50XBT-30	3405-411

2.TEST ARBOR

ORDER NO.	SIZE	CODE NO.
A50	BT-50	3405-412
A40	BT-40	3405-413
A30	BT-30	3405-414

SPECIFICATIONS

Range of measurement	D:300m, L:400mm
Graduation	Xaxis:0.01 mm
	Zaxis:0.01 mm
Machine Size (LxWxH)	662x222x862 mm
G.W	135kgs

Tool Presetter

ORDER NO.TP-3040 CODE NO.3405-401

TP-3040 DELUXE-TYPE TOOL PRESETTER

- The Z spindle use Swiss made non-pitch screw pole can quick move and minor adjustment. Move slightly and swiftly.
- The special equipment “Lock Up Setting” is installed around the spindle to reduce the aberration when measuring.
- Spindle sizes can be changed by using different sleeves to inspect different sizes of tools..
- The standard of sleeve is BT-50, the optional is O.D. BT-50 x I.D. BT-40, O.D. BT-50 x I.D. BT-30
- Germany Digimatic Readout is provided on X axis to display the measuring number.
- Ball Screw bearing Unit is provided on X axis to increase the accuracy.
- Tapered Bearing Units is provided on Z axis for making movement more smoothly.
- Precision Linear Guide is provided on Z axis for wear-resistance and long-term accuracy.

STANDARD ACCESSORIES

Digimatic Readout (XxZ:200x450m/m)
Test Arbor BT#50(DxL:50x250mm)
Cabinet
Dust-Resistance Plastic Cover

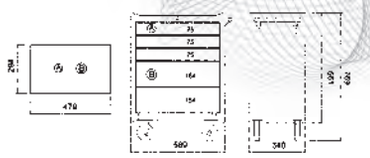
SPECIFICATIONS

Range of measurement	D:300m, L:400mm
Graduation	Xaxis:0.01 mm
	Zaxis:0.01 mm
Size(LxWxH)	
Machine	662x222x860 mm
Cabinet	650x500x760 mm
Weight	
Machine	110kgs
G.W	135kgs

Tool Cabinet

ALL THE OVERALL SIZE IS WITH WHEELS HEIGHT.

5 Drawers Roll Cabinet
Cuft: 6.9′
Net Weight: 31.3 kgs
Gross Weight: 34 kgs



- Ball bearing slide with Quick Disconnect
- Heavy Duty 4″x1″ Caster
- Double wall construction
- Electro - Powder Coating to Resist Scratch & solvent markings
- 10mm Top Mat
- All drawers appended to Drawer Liners

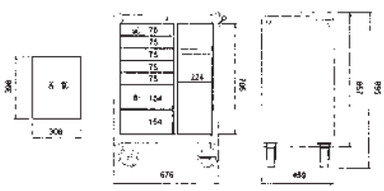
ORDER NO.	CODE NO.
VTC-23	3405-144

570WX345DX650Hmm

mm

	W	D	H
DRAWERS	480	292	75
DRAWERS	480	292	154

8 Drawers Roll Cabinet
Cuft: 13′
Net Weight: 67.9 kgs
Gross Weight: 72.1 kgs



- Ergonomic Large Drawer Design
- Ball bearing slide with Quick Disconnect
- Heavy Duty 5″x2″ Caster
- Double wall construction
- Electro - Powder Coating to Resist Scratch & solvent markings
- 10mm Top Mat
- All drawers appended to Drawer Liners

ORDER NO.	CODE NO.
VTC-25	3405-149

680WX460DX830Hmm

mm

	W	D	H
DRAWERS	308	395	75
DRAWERS	308	395	154

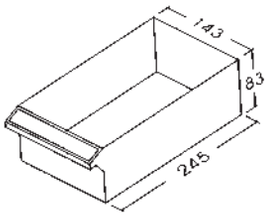
Tooling Trolleys

ORDER NO.VTC-100 CODE NO.3405-154

NEW

WxDxH	500x873x880 mm
Package	1PC/1CTN/2.73CUFT
N.W.	23.91KGS
G.W.	25.90KGS

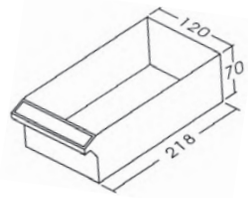
Parts Cabinet



ORDER NO. VA6-212H

THE SIZE OF DRAWER
245D x 143W x 83H (m/m)

ORDER NO. VA6-330H



ORDER NO. VA7-324P

THE SIZE OF DRAWER
218D x 120W x 70H (m/m)

ORDER NO. VA7-448P

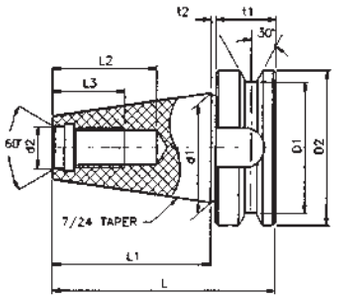
ORDER NO.	SIZE (m/m) W x D x H	METAL	DRAWER NUMBERS	WEIGHT(kgs)	CODE NO.
VA6-212H	362 x 265 x 571	STEEL PLATE COVER WITH ZINC. Drawer material: GPS	12PCS	10.8	3405-200
VA6-330H	533 x 264 x 937		30PCS	25.3	3405-201
VA7-324P	440 x 222 x 642		24PCS	15.5	3405-202
VA7-448P	586 x 222 x 937		48PCS	27.5	3405-203
VA1-525	586 x 222 x 350		25PCS	10	3405-204
VA1-575	586 x 222 x 937		75PCS	32.3	3405-205

Tool Box

ORDER NO. VTB-102

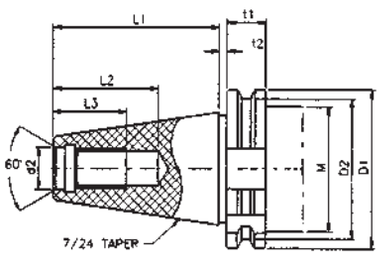
ORDER NO. VTB-901

ORDER NO.	SIZE (m/m) W x D x H	MATERIAL	WEIGHT(kg)	CODE NO.
VTB-102	420 x 235 x 180	ABS	1.9	3405-300
VTB-901	378 x 182 x 144		0.9	3405-301



MAS BT SHANK

SPECIFICATION	D1	D2	t1	t2	L1	L2	L3	L	d1	d2	G
BT30	46	38	20	2	48.4	34	24	70.4	31.75	12.5	M12
BT40**	63	53	25	2	65.4	70	30	92.4	44.45	17	M16
BT50**	100	85	35	3	101.8	90	45	139.8	69.85	25	M24

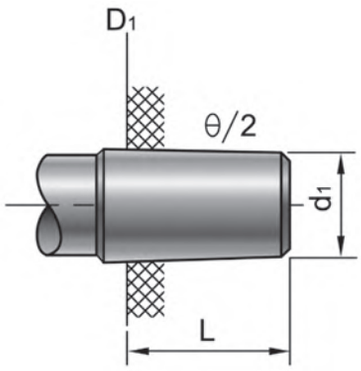


DIN 69871A SHANK

SPECIFICATION	D1	D2	t1	t2	L1	L2	L3	d1	d2	M	P	G
ISO 40	63.55	56.25	15.9	3.2	68.4	42.5	32	44.45	17	44.7	35	M16
ISO 50	97.5	91.25			101.75	61.5	47	69.85	25	70.1		M24

*DRAW BAR DIN 69872 A TYPE

Drill Chuck Taper



JACOBS TAPER

TYPE	θ /2 TAPER	D1	d1	L
JT2	2° 19′52″	14.199	12.386	22.225
JT33	1° 49′01″	15.850	14.237	25.400
JT6	1° 29′88″	17.170	15.852	25.400
JT3	1° 31′26″	20.599	18.951	30.956
JT4	1° 29′59″	28.550	26.346	42.069
JT5	1° 29′05″	35.890	33.422	47.625

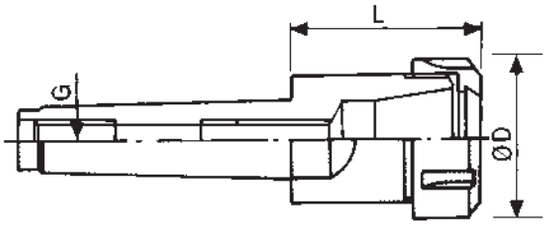
DIN 238

TYPE	θ /2 TAPER	D1	d1	L
B12	1° 25′43″	12.065	11.1	18.5
B16	1° 25′50″	15.733	14.5	24.0
B18	1° 25′50″	17.780	16.2	32.0

ER Spring Collet Chuck System

Collet Holders With Morse Taper Shank

DIN 6499 DIN 228
MT-SHANK



ORDER NO.	TAPER	COLLET TYPE	L	D	G	WEIGHT KGS	CODE NO.
V-401	MT2	ER16	40	28	3/8″-16W or M10X1.5P	0.2	3023-301
V-402		ER20	43	34		0.3	3023-302
V-403		ER25	47	42		0.4	3023-303
V-404	MT3	ER16	40	28	3/8″-16W or 1/2″-12W M10X1.5P, M12X1.75P USA 1/2″-UNC13	0.3	3024-301
V-405		ER32	70	50		0.8	3024-302
V-406		ER40	80	63		1.1	3024-303
NEW V-451		ER20	43	34	1/2″-12NC or M12X1.75P	0.3	3024-304
V-452		ER25	47	42		0.5	3024-305
V-407	MT4	ER32	60	50	5/8″-11W or M16X2.0P	1	3025-301
V-408		ER40	82	63		1.4	3025-302
V-409		ER50	85	78		2.2	3025-303
V-410	MT5	ER40	82	63	1″-8W or M24X3.0P	2.1	3026-301
V-411		ER50	85	78		2.9	3026-302

Collet Chuck Kit With Morse Taper Shank

Including shank, full set of collets, wrench and case.
(ER16, ER20 no Wrench)
1. ER16,20,25 Packed in Wooden Box(W)
2.ER32,40,50, Packed in Plastic Box(P)

Caution:

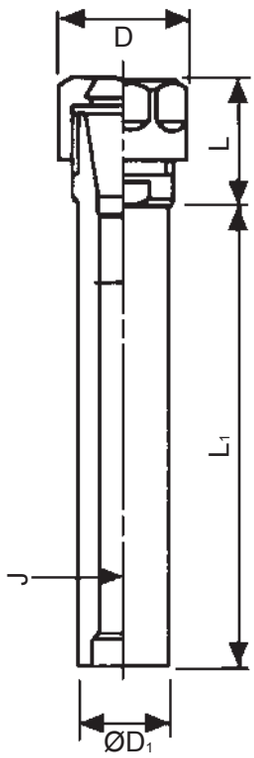
Please notify the taper size, collte type, set range, and set numbers when ordering.

ORDER NO.	TAPER	COLLET TYPE	SET RANGE	SET PCS	WEIGHT KGS.	CODE NO.
V-412	MT2	ER16	1-10	10	1.05	3023-401
V-413		ER16	3-10	8	1	3023-402
V-414		ER20	2-13	12	1.3	3023-403
V-415		ER20	4-13	10	1.2	3023-404
V-416		ER25	2-16	15	2.4	3023-405
V-418		ER25	4-16	7	1.3	3023-407
V-419	MT3	ER16	1-10	10	1.5	3024-401
NEW V-420		ER16	3-10	8	1.1	3024-402
V-441		ER20	2-13	12	1.35	3023-408
V-442		ER20	4-13	10	1.3	3023-409
V-443		ER25	2-16	15	2.5	3023-410
V-444		ER25	4-16	7	2.1	3023-411
V-421		ER32	3-20	18	4.1	3024-403
V-422		ER32	4-20	11	3	3024-404
V-423		ER32	6-20	6	2.7	3024-405
V-424		ER40	4-26	23	7.2	3024-406
V-425		ER40	4-26	15	6	3024-407
V-426		ER40	6-25	7	4.5	3024-408
V-427	MT4	ER32	3-20	18	4.3	3025-401
V-428		ER32	4-20	11	3.2	3025-402
V-429		ER32	6-20	6	2.9	3025-403
V-430		ER40	4-26	23	7.3	3025-404
V-431		ER40	4-26	15	6.1	3025-405
V-432		ER40	6-25	7	4.6	3025-406
V-433		ER50	12-34	12	9	3025-407
V-434	MT5	ER40	4-26	23	8.2	3026-401
V-435		ER40	4-26	15	6.9	3026-402
V-436		ER40	6-25	7	5.4	3026-403
V-437		ER50	12-34	12	9.5	3026-404

ER Spring Collet Chuck System

Collet Holders With Straight Shank

DIN6499 STRAIGHT SHANK



ORDER NO.	COLLET TYPE	SHANK D1XL1	L	D	J	KGS	CODE NO.
V-530	ER11	Ø16X50	21	19	M10	0.1	3007-300
V-531		Ø16X100	21	19	M10	0.2	3007-311
V-532		Ø16X150	21	19	M10	0.3	3007-312
V-501A	ER16	Ø16X100	21	28	M12	0.3	3003-301A
V-501		Ø20X50	30	28	M12	0.2	3003-301
V-502		Ø20X100	30	28	M12	0.3	3003-302
V-503		Ø20X150	30	28	M12	0.4	3003-303
V-504		Ø25X100	30	28	M12	0.5	3003-304
V-504A		Ø25X50	30	28	M12	0.3	3003-306
V-505		Ø25X150	30	28	M12	0.7	3003-305
V-505A		Ø25X200	30	28	M12	0.5	3003-307
V-506	ER20	Ø20X50	36	34	M12	0.3	3004-301
V-507		Ø20X100	36	34	M12	0.3	3004-302
V-508		Ø20X150	36	34	M12	0.5	3004-303
V-509		Ø25X150	36	34	M12	0.7	3004-304
V-509A		Ø25X100	36	34	M12	0.5	3004-305
V-509B		Ø25X50	36	34	M12	0.3	3004-306
V-510	ER25	Ø20X50	46	42	M12	0.4	3005-301
V-511		Ø20X100	46	42	M12	0.5	3005-302
V-512		Ø20X150	46	42	M12	0.6	3005-303
V-513		Ø25X100	46	42	M12	0.6	3005-304
V-514		Ø25X150	46	42	M12	0.7	3005-305
V-515		Ø32X60	46	42	M12	0.6	3005-306
V-516	ER32	Ø25X80	54	50	M12	0.8	3006-301
V-517		Ø32X100	54	50	M12	1.1	3006-302
V-517A		Ø32X150	54	50	M12	1.5	3006-305
V-518		Ø40X100	54	50	M12	1.4	3006-303
V-523	ER40	Ø32X100	55	63	M16	1.5	3007-302
V-524		Ø40X100	55	63	M16	1.8	3007-303

NEW

ER Spring Collet Chuck System

DIN 6499 STRAIGHT SHANK

Collet Chuck Kit With Straight Shank

Including shank, full set of collets,
wrench and case.

COLLET CHUCK SETS

ORDER NO.	SHANK D1XL1	COLLET TYPE	SET RANGE	SET PCS	KGS	CODE NO.
V-601	Ø20X50L	ER16	1-10	10	0.9	3003-401
V-602	Ø20X50L		3-10	8	0.8	3003-402
• V-603	Ø20X100L		1-10	10	1	3003-403
• V-604	Ø20X100L		3-10	8	0.9	3003-404
V-605	Ø20X150L		1-10	10	1.1	3003-405
V-606	Ø20X150L		3-10	8	0.5	3003-406
V-607	Ø25X100L		1-10	10	1.1	3003-407
V-607A	Ø25X50L		1-10	10	1.1	3003-411
V-608	Ø25X100L		3-10	8	1.1	3003-408
V-608A	Ø25X50L		3-10	8	1.1	3003-412
V-609	Ø25X150L		1-10	10	1.3	3003-409
V-610	Ø25X150L		3-10	8	1.3	3003-410
V-611	Ø20X50L	ER20	2-13	12	1.2	3004-401
V-612	Ø20X50L		4-13	10	1.2	3004-402
• V-613	Ø20X100L		2-13	12	1.2	3004-403
• V-614	Ø20X100L		4-13	10	1.2	3004-404
V-615	Ø20X150L		2-13	12	1.4	3004-405
V-615A	Ø25X50L		2-13	12	1.3	3004-409
V-616	Ø20X150L		4-13	10	1.3	3004-406
V-616A	Ø25X50L		4-13	10	1.3	3004-410
V-617	Ø25X100L		2-13	12	1.4	3004-407
V-617A	Ø25X150L		2-13	12	1.5	3004-411
V-618	Ø25X100L		4-13	10	1.4	3004-408
V-618A	Ø25X150L		4-13	10	1.5	3004-412
V-619	Ø20X50L	ER25	2-16	15	2.2	3005-401
V-621	Ø20X50L		4-16	7	1.7	3005-403
V-622	Ø20X100L		2-16	15	2.3	3005-404
V-624	Ø20X100L		4-16	7	1.8	3005-406
V-625	Ø20X150L		2-16	15	2.4	3005-407
V-627	Ø20X150L		4-16	7	2	3005-409
V-628	Ø25X100L		2-16	15	2.3	3005-410

ORDER NO.	SHANK D1XL1	COLLET TYPE	SET RANGE	SET PCS	KGS	CODE NO.
V-681	Ø16X50L	ER11	1-7	13	0.5	3002-401
V-682	Ø16X50L		1-7	7	0.5	3002-402
V-683	Ø16X100L		1-7	13	0.6	3002-403
V-684	Ø16X100L		1-7	7	0.5	3002-404

ORDER NO.	SHANK D1XL1	COLLET TYPE	SET RANGE	SET PCS	KGS	CODE NO.
V-630	Ø25X100L	ER25	6-16	7	2	3005-412
V-631	Ø25X150L		2-16	15	2.6	3005-413
V-633	Ø25X150L		6-16	7	1.9	3005-415
V-634	Ø32X60L		2-16	15	2.5	3005-416
V-636	Ø32X60L		6-16	7	1.9	3005-418
V-637	Ø25X80L	ER32	3-20	18	4.1	3006-401
V-638	Ø25X80L		4-20	11	3	3006-402
V-639	Ø25X80L		3-20	6	2.7	3006-403
V-640	Ø32X100L		4-20	18	4.3	3006-404
V-641	Ø32X100L		6-20	11	3.2	3006-405
V-642	Ø32X100L		6-20	6	2.9	3006-406
V-643	Ø40X100L		3-20	18	4.6	3006-407
V-644	Ø40X100L		4-20	11	3.5	3006-408
V-645	Ø40X100L		6-20	6	3.2	3006-409
V-646	Ø1″X3L		3-20	18	4.1	3006-410
V-647	Ø1″X3L		4-20	11	3	3006-411
V-648	Ø1″X3L		6-20	6	2.9	3006-412
V-658	Ø32X100L	ER40	4-26	23	7.3	3007-404
V-659	Ø32X100L		4-26	15	6.1	3007-405
V-660	Ø32X100L		6-25	7	4.6	3007-406
V-661	Ø40X100L		4-26	23	7.6	3007-407
V-662	Ø40X100L		4-26	15	6.5	3007-408
V-663	Ø40X100L		6-25	7	5	3007-409

- **V-603, V-604 are the most popular item.**
- **THE ER-20/25/32/40 ARE TO BE CONTINUED**
- V-613, V-614 are the most popular item.

ER Spring Collet Chuck System

MINI TYPE STRAIGHT SHANK HOLDER

DIN 6499 MINI STRAIGHT SHANK

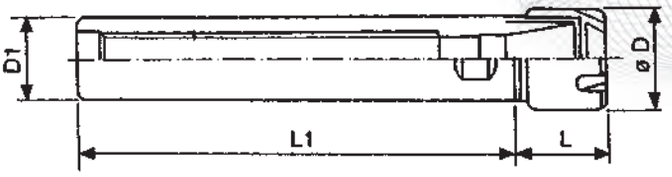
NEW

MINI TYPE NUT

Collet Chuck Kit With Straight Shank

Including shank,
full set of collets,
wrench and case.

MINI TYPE NUT



COLLET HOLDER (MINI TYPE)

ORDER NO.	COLLET TYPE	SHANK D1XL1	D	L	KGS	CODE NO.
V-551	ER11M	ST16X50L	16	22	0.1	3011-301
V-552		ST16X100L	16		0.2	3011-302
V-552A		ST16X150L	16		0.3	3011-303
V-553	ER16M	ST20X50L	22	32	0.2	3012-301
V-554		ST20X100L	22		0.3	3012-302
V-555		ST20X150L	22		0.4	3012-303
V-555A		ST20X200L	22		0.4	3012-307
V-556	ER20M	ST20X50L	28	33	0.2	3013-301
V-557		ST20X100L	28		0.3	3013-302
V-558		ST20X150L	28		0.4	3013-303
V-559		ST25X100L	28		0.4	3013-304
V-560		ST25X150L	28		0.6	3013-305
V-561	ER16M	ST16X100L	32	22	0.2	3012-304
V-562		ST25X100L	32		0.4	3012-305
V-563		ST25X150L	32		0.6	3012-306
V-563A		ST25X200L	32	32	0.5	3012-308
V-557A	ER20M	ST20X200L	28	35	0.4	3013-306
V-560A		ST25X200L	28		0.5	3013-307

※ For the 50L A side of the shank is milled has flate surface.

MINI TYPE

ORDER NO.	SHANK D1XL1	COLLET TYPE	SET RANGE	SET PCS	KGS	CODE NO.
V-691A	ST16X50L	ER11M	1-7	7	0.5	3011-401
V-691B	ST16X50L		1-7	13	0.5	3011-402
V-692A	ST16X100L		1-7	7	0.6	3011-403
V-692B	ST16X100L		1-7	13	0.6	3011-404
V-693A	ST20X50L	ER16M	1-10	10	0.7	3012-401
V-693B	ST20X50L		3-10	8	1.0	3012-402
V-693C	ST16X100L		1-10	10	0.6	3012-407
V-694A	ST20X100L		1-10	10	0.9	3012-403
V-694B	ST20X100L		3-10	8	1.1	3012-404
V-695A	ST20X150L		1-10	10	1.3	3012-405
V-695B	ST20X150L		3-10	8	1.2	3012-406
V-695C	ST25X100L		1-10	10	1.2	3012-408
V-695D	ST25X150L		1-10	10	1.4	3012-409
V-696A	ST20X50L	ER20M	2-13	12	1.3	3013-401
V-696B	ST20X50L		4-13	10	1.2	3013-402
V-697A	ST20X100L		2-13	12	1.1	3013-403
V-697B	ST20X100L		4-13	10	1.1	3013-404
V-698A	ST20X150L		2-13	12	1.2	3013-405
V-698B	ST20X150L		4-13	10	1.2	3013-406
V-698C	ST25X100L		2-13	12	1.4	3013-407
V-698D	ST25X150L		2-13	12	1.5	3013-408

Clamping Nuts For Collets

ER CLAMPING NUT SYSTEM

DIN 6499

ER20M

ER16M

ER11MS

ER40KM
WITH A BEARING

ER40UM

ER16UM

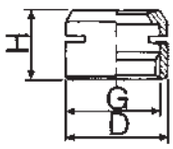


FIG.1 ER11MS

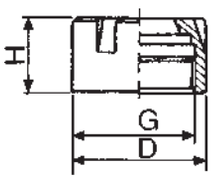


FIG.2 ER11,16,20M
ER8M, 25M

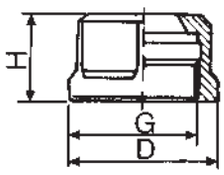


FIG.3 ER11,16,20UM

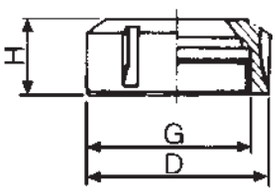


FIG.4 ER25,32,40,50UM

BEARING TYPE

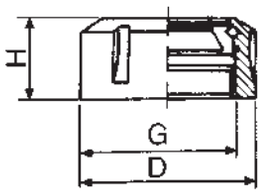


FIG.5 ER40,50KM

CLAMPING NUTS

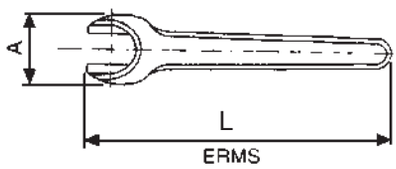
ORDER NO.	Fig.	COLLET TYPE	D	H	G	WEIGHT KG.	CODE NO.
V-800	3	ER11UM	19	13	M14X0.75P	0.02	3015-001
V-801	3	ER16UM	28	18	M22X1.5P	0.04	3015-002
V-802	3	ER20UM	34	21	M25X1.5P	0.07	3015-003
V-803	4	ER25UM	42	20	M32X1.5P	0.1	3015-004
V-804	4	ER32UM	50	23	M40X1.5P	0.2	3015-005
V-805	4	ER40UM	63	25	M50X1.5P	0.3	3015-006
V-806	4	ER50UM	78	35	M64X2.0P	0.5	3015-007
V-807	1	ER11MS	16	12	M13X0.75P	0.01	3015-008
V-808	2	ER16M	22	18	M19X1.0P	0.02	3015-009
V-809	2	ER20M	28	19	M24X1.0P	0.03	3015-010
V-810A	5	ER40KM	63	29	M50X1.5P	0.4	3015-011
V-810B	5	ER50KM	78	40	M64X2.0P	0.6	3015-012
V-810C	2	ER11M	16	12	M13X0.75P	0.01	3015-013
V-810D	2	ER8M	12	10.8	M10X0.75P	0.01	3015-014
V-810E	2	ER25M	35	20	M30X1.0P	0.6	3015-015

Clamping Wrench For Collets

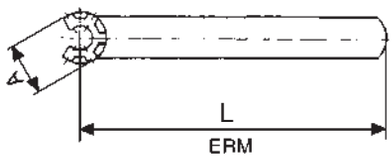
ER WRENCH SYSTEM

DIN6499

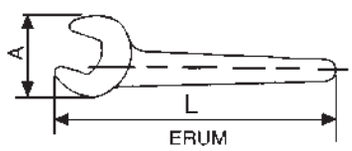
ERMS



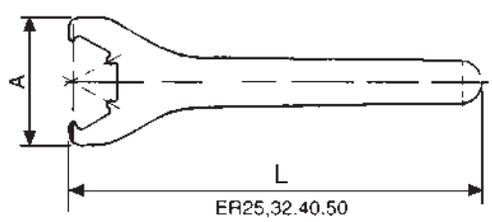
ERM



ERUM11, 16, 20



ERUM25, 32, 40, 50



ORDER NO.	TYPE	A	L	KGS	CODE NO.
V-820	ER11UM	35	135	0.1	3015-100
V-821	ER11MS	22	100	0.04	3015-101
V-822	ER11M	17	95	0.04	3015-102
V-823	ER16M	22.5	118	0.06	3015-103
V-815	ER16UM	44	140	0.2	3015-104
V-824	ER20M	28	130	0.1	3015-105
V-816	ER20UM	53	170	0.2	3015-106
V-811	ER25UM	65	210	0.2	3015-107
V-812	ER32UM	75	250	0.3	3015-108
V-813	ER40UM	90	290	0.5	3015-109
V-814	ER50UM	110	350	0.8	3015-110
V-817	ER8M	13	75	0.02	3015-111
V-818	ER25M	36.5	135	0.1	3015-112

ER Spring Collet Chuck System

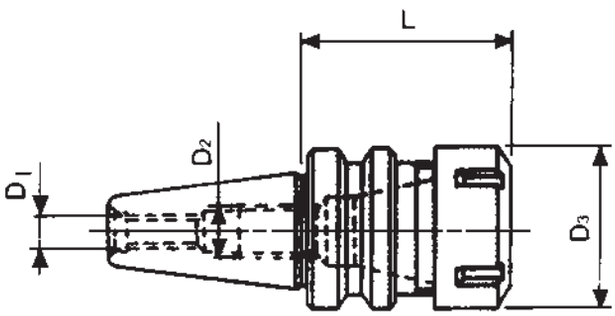
Collet Holders With BT Taper Shank (For CNC Machine Center) ER-32 ER-40

MAS403 BT-SHANK

BT-40-ER32

BT-40-ER20M

ACCURACY
RUNOUT 0.005m/m
TAPER SHANK AT-3
R.P.M. 7000



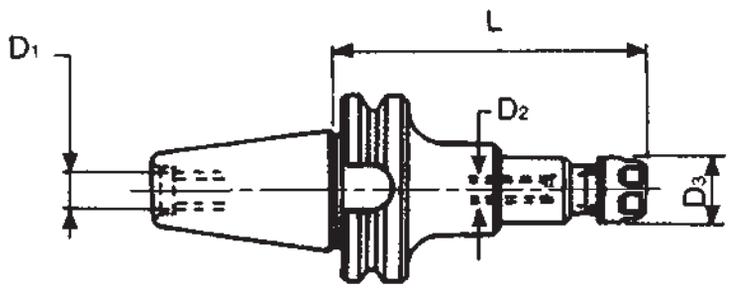
ORDER NO.	TAPER	COLLET TYPE	D1	D2	D3	L	KGS	CODE NO.
V-700	BT30	ER32	M12	M12X1.75P	50	60	0.7	3031-303
V-703A	BT40	ER32	M16X2.0P	M22X1.5P	50	70	1.4	3032-305
V-703B		ER32	M16X2.0P	M22X1.5P	50	100	1.7	3032-306
V-704		ER40	M16X2.0P	M22X1.5P	63	80	1.7	3032-307
V-704B		ER40	M16X2.0P	M22X1.5P	63	100	2	3032-421
V-705	BT50	ER32	M24X3.0P	M28X1.5P	50	100	4.5	3033-305
V-706		ER40	M24X3.0P	M28X1.5P	63	100	4.6	3033-306
V-706B		ER40	M24X3.0P	M28X1.5P	63	150	5.7	3033-307
V-707		ER50	M24X3.0P	M36X1.5P	78	100	5.1	3033-308
V-710	BT30	ER11	M12	M12X1.75P	19	60	0.5	3033-311
V-711		ER11	M12	M12X1.75P	19	100	0.6	3033-312
V-712		ER11M	M12	M12X1.75P	16	100	0.9	3033-313
V-713		ER16	M12	M12X1.75P	28	100	0.8	3033-314
V-714		ER16M	M12	M12X1.75P	22	100	0.7	3033-315
V-715		ER20	M12	M12X1.75P	34	60	0.6	3033-316
V-716		ER20	M12	M12X1.75P	34	100	0.9	3033-317
V-717		ER20M	M12	M12X1.75P	28	100	0.9	3033-318
V-718		ER25	M12	M12X1.75P	42	60	0.7	3033-319
V-719		ER40	M12	M12X1.75P	63	70	1	3033-320
V-720	BT40	ER11	M16	M22X11.5P	19	70	1.2	3033-321
V-721		ER11	M16	M22X11.5P	19	100	1.5	3033-322
V-722A		ER11M	M16	M22X11.5P	16	100	1.2	3033-323
V-723A		ER16M	M16	M22X11.5P	22	100	1.3	3033-324
V-723B		ER16M	M16	M22X11.5P	22	150	1.5	3033-330
V-724A		ER20M	M16	M22X11.5P	28	100	1.6	3033-325
V-724B		ER20M	M16	M22X11.5P	28	150	1.6	3033-331
V-725		ER25	M16	M22X11.5P	42	70	1.3	3033-326
V-726		ER25	M16	M22X11.5P	42	100	1.6	3033-327
V-727		ER50	M16	M22X11.5P	78	90	2.2	3033-328

ER Spring Collet Chuck System

Collet Holders With Extension Type BT Taper Shank
ER-16, ER-20

BT-40-ER20

ACCURACY
RUNOUT 0.005m/m
TAPER SHANK AT-3
R.P.M. 7000



ORDER NO.	TAPER	COLLET TYPE	D3	L	D1	WEIGHT KGS	CODE NO.
V-770	BT30	ER16	28	60	M12	0.6	3031-301
V-772	BT40	ER16	28	70	M16	1.2	3032-301
V-773		ER16	28	100	M16	1.4	3032-302
V-774		ER20	34	70	M16	1.3	3032-303
V-774A		ER16	28	150	M16	1.7	3032-308
V-775		ER20	34	100	M16	1.5	3032-304
V-775A		ER20	34	135	M16	1.6	3032-309
V-775B		ER20	34	150	M16	1.9	3032-310
V-775C		ER25	42	150	M16	2.1	3032-311
V-733		ER32	50	150	M16	2	3033-354
V-776	BT50	ER16	28	100	M24	2.3	3033-301
V-777		ER16	28	150	M24	4.3	3033-302
V-778		ER20	34	100	M24	4.1	3033-303
V-779		ER20	34	150	M24	4.8	3033-304
V-743A	BT50	ER16	28	200	M24	7.5	3033-364
V-735		ER20	34	200	M24	5	3033-356
V-736		ER25	42	100	M24	4.3	3033-357
V-737A		ER25	42	150	M24	4.8	3033-358
V-744A		ER25	42	200	M24	8	3033-365
V-738A		ER32	50	150	M24	5.5	3033-359
V-739A		ER32	50	200	M24	6.5	3033-360
V-741A		ER40	63	200	M24	7.5	3033-362
V-742A		ER50	78	150	M24	6.7	3033-363

ER Spring Collet Chuck System

MAS403 BT-SHANK DIN 6499

Collet Chuck Kit With BT Taper Shank

Including shank, full set of collets,
wrench and case.

1.ER16, ER20 PACKED IN WOODEN BOX

2.ER32, ER40, ER50, PACKED IN PLASTIC BOX

3.PACKAGE INCLDING : CHUCK, COLLET, WRENCH, BOX

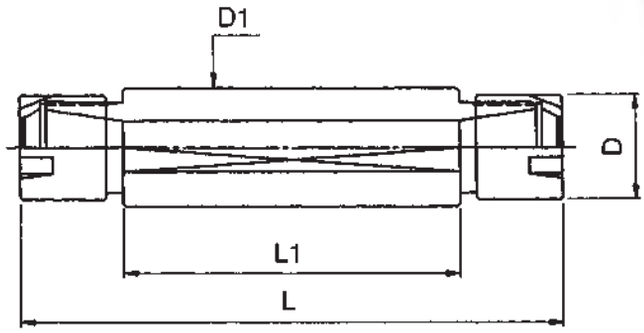
Caution:

Please notify the taper size, collet type, set range,and set numbers when ordering.

ORDER NO.	BT TAPER	COLLET TYPE	SET RANGE	COLLET PCS	WEIGHT KGS	CODE NO.
V-780	BT30-60L	ER16	1-10	10	1.9	3031-401
V-780A	BT30-100L	ER16	1-10	10	2	3031-406
V-781	BT40-70L	ER16	1-10	10	2.3	3032-401
V-782	BT40-100L	ER16	1-10	10	2.7	3032-402
V-783	BT30-60L	ER20	2-13	12	2.5	3031-402
V-783A	BT30-100L	ER20	2-13	12	2.6	3032-413
V-783B	BT30-60L	ER25	2-16	15	2.5	3032-414
V-783C	BT30-60L	ER25	4-16	7	2.8	3032-415
V-784	BT40-100L	ER20	2-13	12	3	3032-403
V-784A	BT40-70L	ER20	2-13	12	2.8	3032-416
V-784B	BT40-70L	ER25	2-16	15	3.2	3032-417
V-784C	BT40-100L	ER25	4-16	7	3	3032-418
V-785	BT30-60L	ER32	3-20	18	4.4	3031-403
V-786	BT30-60L	ER32	4-20	11	3.8	3031-404
V-787	BT30-60L	ER32	6-20	6	3.4	3031-405
V-788	BT40-70L	ER32	3-20	18	5.2	3032-404
V-789	BT40-70L	ER32	4-20	11	4.2	3032-405
V-790	BT40-70L	ER32	6-20	6	3.8	3032-406
V-791	BT40-100L	ER32	3-20	18	5.7	3032-407
V-792	BT40-100L	ER32	4-20	11	4.7	3032-408
V-793	BT40-100L	ER32	6-20	6	4.3	3032-409
V-794	BT40-80L	ER40	4-26	23	8.9	3032-410
V-795	BT40-80L	ER40	4-26	15	7.6	3032-411
V-796	BT40-80L	ER40	6-25	7	6	3032-412
V-797	BT50-100L	ER40	4-26	23	11.3	3033-401
V-798	BT50-100L	ER40	4-26	15	10	3033-402
V-799	BT50-100L	ER40	6-26	7	8.5	3033-403
V-737	BT50-150L	ER40	4-26	23	12.2	3033-404
V-738	BT50-150L	ER40	4-26	15	11	3033-405
V-739	BT50-150L	ER40	6-26	7	9.5	3033-406
V-740	BT50-100L	ER50	12-34	12	12	3033-407
V-740C	BT40-90L	ER50	12-34	12	9	3033-408
V-740B	BT50-100L	ER32	3-20	18	7.5	3033-409

ST/ER Straight Shank With Double Head Spindle

M TYPE DOUBLE HEAD **FOR CNC LATHE ONLY**

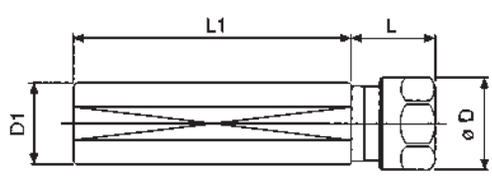


ORDER NO.	COLLET TYPE	SHANK (ØD1-ER-L1)	L	L1	D	WEIGHT (KGS)	CODE NO.
V-830	ER11	ø20-ER11M2-50	70	50	16	0.2	3032-430
V-831	ER11	ø20-ER11M2-78	108	78	16	0.3	3032-431
V-832	ER16	ø20-ER16M2-50	82	50	22	0.2	3032-432
V-833	ER16	ø20-ER16M2-70	112	70	22	0.32	3032-433
V-834	ER16	ø25-ER16M2-50	92	50	22	0.25	3032-434
V-835	ER16	ø25-ER16M2-80	122	80	22	0.35	3032-435
V-836	ER20	ø25-ER20M2-50	92	50	28	0.3	3032-436
V-837	ER20	ø25-ER20 M2-80	122	80	28	0.35	3032-437

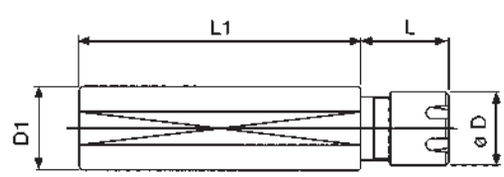
ST/ER Straight Shank With Single Head Spindle

FOR CNC LATHE ONLY

M TYPE SINGLE HEAD **UM TYPE**



M TYPE SINGLE HEAD

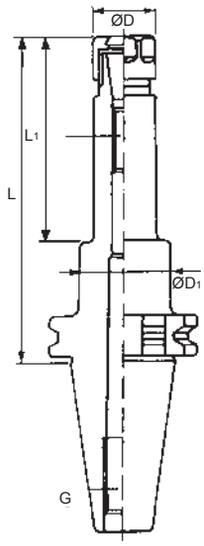


UM TYPE

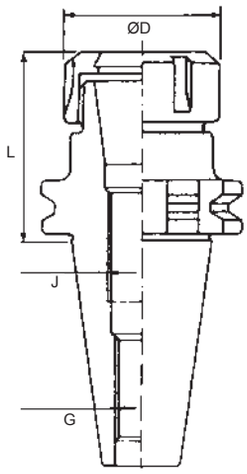
ORDER NO.	COLLET TYPE	SHANK (ØD1-ER-L1)	L	L1	D	WEIGHT (KGS)	CODE NO.
V-841	ER16	ø20-ER16M-70	21	70	22	0.2	3032-441
V-842	ER16	ø25-ER16M-70	21	70	22	0.25	3032-442
V-843	ER16	ø3/4"-ER16M-70	21	70	22	0.2	3032-443
V-844	ER16	ø20-ER16UM-70	21	70	28	0.2	3032-444
V-845	ER16	ø25-ER16UM-70	21	70	28	0.25	3032-445
V-846	ER16	ø3/4"-ER16UM-70	21	70	28	0.2	3032-446
V-847	ER20	ø22-ER20UM-70	23	70	34	0.25	3032-447
V-848	ER20	ø25-ER20UM-70	23	70	34	0.3	3032-448

ER-SK Taper Shank

COLLET HOLDER WITH SK-SHANK DIN 69871 & COLLET CHUCK SET DIN 69871



ORDER NO.	COLLET TYPE	TAPER	D	L	G	WEIGHT KGS	CODE NO.
V-741	ER16	SK40	28	100	M16	1.5	3029-301
V-741K	ER16	SK30	28	60	M12	0.45	3029-311
V-741B	ER16	SK50	28	100	M24	3.5	3029-317
V-742	ER20	SK40	34	100	M16	1.5	3029-302
V-742K	ER20	SK30	34	60	M12	0.5	3029-312
V-742C	ER16	SK40	28	70	M16	1.1	3029-315
V-742D	ER20	SK40	34	70	M16	1.2	3029-316
V-742E	ER20	SK50	34	100	M24	3.5	3029-318
V-743	ER16	SK50	28	150	M24	4.8	3030-301
V-744	ER20	SK50	34	150	M24	4.8	3030-302



ORDER NO.	COLLET TYPE	TAPER	D	L	G	WEIGHT KGS	CODE NO.
V-745	ER32	SK40	50	70	M16	1.2	3029-303
V-745A	ER32	SK30	50	60	M12	0.8	3029-314
V-745B	ER32	SK50	50	70	M24	3.7	3029-320
V-746	ER40	SK40	63	80	M16	1.6	3029-304
V-747	ER40	SK50	63	100	M24	4.2	3030-303
V-749	ER25	SK40	42	70	M16	1.1	3030-304
V-749A	ER25	SK50	42	100	M24	3.4	3029-319

COLLET CHUCK KIT WITH SK-SHANK DIN 69871

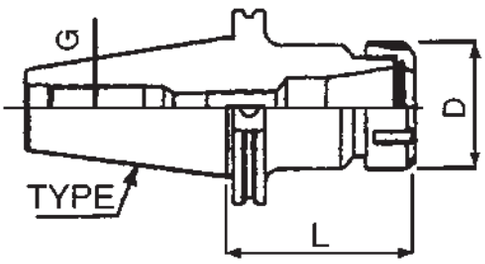
INCLUDING SHANK, FULL SET OF COLLETS, WRENCH AND CASE.

ORDER NO.	ER TYPE	SK TAPER	SET RANGE	SET PCS	WEIGHT KGS	CODE NO.
V-751	ER16	SK40-70L	1-10	10PCS	2.3	3029-401
V-751A	ER16	SK30-60L	1-10	10PCS	1.8	3029-420
V-752	ER20	SK40-70L	2-13	12PCS	3	3029-402
V-752A	ER20	SK30-60L	2-13	12PCS	2.4	3029-421
V-753	ER32	SK40-70L	3-20	18PCS	5.2	3029-403
V-754	ER32	SK40-70L	4-20	11PCS	4.2	3029-404
V-754A	ER32	SK30-60L	3-20	18PCS	4.2	3029-423
V-754B	ER32	SK50-100L	3-20	18PCS	7	3029-424
V-755	ER32	SK40-60L	6-20	6PCS	3.8	3029-405
V-756	ER40	SK40-80L	4-26	23PCS	8.9	3029-406
V-757	ER40	SK40-80L	4-26	15PCS	7.6	3029-407
V-758	ER40	SK40-80L	6-25	7PCS	6	3029-408
V-759	ER40	SK50-100L	4-26	23PCS	11.3	3030-401
V-760	ER40	SK50-100L	4-26	15PCS	10	3030-402
V-761	ER40	SK50-100L	6-26	7PCS	8.5	3030-403
V-762	ER25	SK40-70L	2-16	15PCS	3.5	3029-409
V-763	ER25	SK40-70L	4-26	7PCS	3.2	3029-410

ER16, ER20 PACKED IN WOODEN CASE
ER32, ER40 PACKED IN PLASTIC CASE

ER Spring Collet Chuck System

COLLET HOLDER WITH CAT-SHANK



ORDER NO.	COLLET TYPE	TAPER	D	L	G	WEIGHT KGS	CODE NO.
V-870	ER16	CAT30	28	2″	1/2”-13	0.8	3034-301
V-871	ER16	CAT40	28	3″	5/8”-11	1.1	3035-301
V-872	ER20		34	3″		1.2	3035-302
V-873	ER25		42	2-1/2″		1.2	3035-303
V-874	ER32		50	2-1/2″		1.2	3035-304
V-875	ER40		63	3″		1.5	3035-305
V-876	ER40	CAT50	63	3-1/2″	1/8”	4	3036-301

COLLET CHUCK KIT WITH CAT-SHANK

INCLUDING SHANK, FULL SET OF COLLET, WRENCH AND CASE.

1. ER16, ER20, ER25 PACKED IN WOODEN BOX.
2. ER32,ER40, PACKED IN PLASTIC BOX.
3. PACKAGE INCLUDING: CHUCK, COLLET, WRENCH, BOX.

ORDER NO.	COLLET TYPE	CAT TAPER	SET RANGE	SET PCS	WEIGHT KGS	CODE NO.
V-878	ER16	CAT40-3″L	1.0-10	10	2.3	3035-401
V-879	ER20	CAT40-3″L	2.0-13	12	2.5	3035-402
V-880	ER25	CAT40-2 1/2″L	2.0-16	15	3	3035-403
V-881		CAT40-2 1/2″L	4.0-16	7	2.8	3035-404
V-882	ER32	CAT40-2 1/2″L	3.0-20	18	5.2	3035-405
V-883		CAT40-2 1/2″L	4.0-20	11	4.2	3035-406
V-884		CAT40-2 1/2″L	6.0-20	6	3.8	3035-407
V-885	ER40	CAT40-3″L	4.0-26	23	8.9	3035-408
V-886		CAT40-3″L	4.0-26	15	7.6	3035-409
V-887		CAT40-3″L	6.0-25	7	6	3035-410
V-888	ER40	CAT50-3 1/2″L	4.0-26	23	11.2	3036-401
V-889		CAT50-3 1/2″L	4.0-26	15	9.8	3036-402
V-890		CAT50-3 1/2″L	6.0-25	7	8.3	3036-403

Milling Chuck

COLLET HOLDER WITH #25 COLLET CHUCK DIN 6388 TYPE A OZ-25

DIN 6388 # 25 SERIES
DIN 2080 NT-SHANK

1. Best selected quality tool steel hardened & Precision ground.
2. Accuracy of concentric to within 0.008" per inch.(0.02mm per 25mm)
3. High rigidity & Clamping force.
4. 1 set including 1chuck shank holder 1wrench 1case. 7 or 15 pcs of collet.

CHUCK SHANK ONLY

ORDER NO.	CHUCK SHANK	DRAW BAR THREADS		WEIGHT(kg)		MEAS. CFT	CODE NO.
		SAE	METRIC	SAE	METRIC		
VB-MT-2	MT2	3/8″-16	M10X1.5P	1	1	0.3	3101-001
VB-MT-3	MT3	3/8″-16	M10X1.5P	1.1	1	0.3	3101-002
		1/2″-12					
		1/2″-13	M12X1.75P				
VB-MT-4	MT4	5/8″-11	M16X2.0P		1.4	0.3	3101-003
VB-MT-5	MT5	1″-8	M24X3.0P		2	0.5	3101-004
VB-R8	R-8	7/16″-20		1.3		0.3	3101-005
VB-NT30	NT30	1/2″-12	M12X1.75P	1.1	1.1	0.3	3101-006
		1/2″-13					
VB-NT40	NT40	5/8″-11	M16X2.0P	1.5	1.5	0.3	3101-007
VB-NT50	NT50	1″-8	M24X3.0P	3.4	3.4	0.5	3101-008

Please Notify the Draw Bar Thread Size When ordering.

MILLING COLLET CHUCK KIT

Including Shank, full set of collets, wrench and case.

Collet Chuck Kit

DIN 6388
OZ-25 TYPE

NEW

FULL SET

ORDER NO.	COLLETS SIZE OZ-25		PCS	WEIGHT (KGS)	CODE NO.
	TAPER	COLLETS			
VB-101	NT30	Inch 1/8″-1″ 15PCS 1/4″-1″ 7PCS	7	3.7	3101-101
VB-102			15	5.2	3101-102
VB-103	NT40		7	4	3101-103
VB-104			15	5.5	3101-104
VB-105	NT50		7	6.5	3101-105
VB-106			15	8.5	3101-106
VB-107	MT3		7	3.3	3101-107
VB-108			15	5.2	3101-108
VB-109	MT4	Metric 3mm-25mm 15pcs 6mm-25mm 7pcs	7	3.9	3101-109
VB-110			15	5.4	3101-110
VB-111	MT5		7	4.7	3101-111
VB-112			15	6.2	3101-112
VB-113	R8		7	3.7	3101-113
VB-114			15	5.2	3101-114
VB-115	MT2		7	3.6	3101-115
VB-116			15	5.1	3101-116

Please Notify the Type Size,
Collet Type, Set Range,and Set Numbers When Ordering.

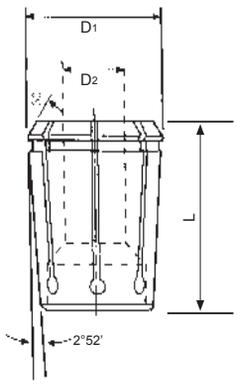
CONTENT COLLET SET SIZE

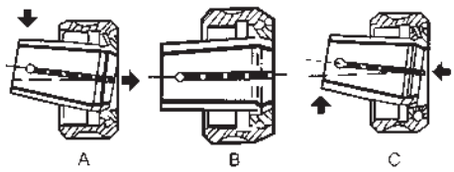
7 PCS/SET	MM	6, 8, 10, 12,16, 20, 25MM
	INCH	1/4″, 5/16″, 3/8″, 1/2″, 5/8″, 3/4″, 1″
15 PCS/SET	MM	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 18, 20, 25MM
	INCH	1/8″, 3/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 9/16″, 5/8″, 11/16″, 3/4″, 13/16″, 7/8″, 15/16″, 1″

DIN 6388 Collet For Milling Chuck

COLLET DIN 6388, TYPE A **DIN 6388 #16,#25,#32 SERIES**

COLLET MUST BE ASSEMBLED INTO THE CLAMPING NUT BEFORE INSERTING INTO THE CHUCK





METRIC

ORDER NO.	D1	L	D_2(MM)
OZ-16-□	25.5	40	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
OZ-25-□	35.05	52	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 25
OZ-32-□	44	60	6, 8, 10, 12, 16, 20, 25, 32

INCH

ORDER NO.	D1	L	D_2(INCH)
OZ-25-□	35.05	52	1/8″, 3/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 9/16″, 5/8″, 11/16″, 3/4″, 13/16″, 7/8″, 15/16″, 1″
OZ-32-□	43.7	60	1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 9/16″, 5/8″, 11/16″, 3/4″, 13/16″, 7/8″, 15/16″, 1″, $1\frac{1}{8}$″, $1\frac{1}{4}$″

■ RANGE SIZE:3-25(1/8″-1″)

OZ-25 ■ D:35.05 ■ L:52 ■ TAPER:1:10 ■ WEIGHT:0.18KGS

ORDER NO.	MM SIZE	CODE NO.
OZ-2503	3.0	3100-101
OZ-2504	4.0	3100-102
OZ-2505	5.0	3100-103
OZ-2506	6.0	3100-104
OZ-2507	7.0	3100-105
OZ-2508	8.0	3100-106
OZ-2509	9.0	3100-107
OZ-2510	10	3100-108
OZ-2511	11	3100-109
OZ-2512	12	3100-110
OZ-2513	13	3100-111
OZ-2514	14	3100-112
OZ-2515	15	3100-113
OZ-2516	16	3100-114
OZ-2517	17	3100-115
OZ-2518	18	3100-116
OZ-2519	19	3100-117
OZ-2520	20	3100-118
OZ-2521	21	3100-119
OZ-2522	22	3100-120
OZ-2523	23	3100-121
OZ-2524	24	3100-122
OZ-2525	25	3100-123

ORDER NO.	INCH SIZE	CODE NO.
OZ-2526	1/8″	3100-124
OZ-2527	3/16″	3100-125
OZ-2528	1/4″	3100-126
OZ-2529	5/16″	3100-127
OZ-2530	3/8″	3100-128
OZ-2531	7/16″	3100-129
OZ-2532	1/2″	3100-130
OZ-2533	9/16″	3100-131
OZ-2534	5/8″	3100-132
OZ-2535	11/16″	3100-133
OZ-2536	3/4″	3100-134
OZ-2537	13/16″	3100-135
OZ-2538	7/8″	3100-136
OZ-2539	15/16″	3100-137
OZ-2540	1″	3100-138

DIN 6388 Collet For Milling Chuck

COLLET DIN 6388, TYPE A

DIN 6388 #16,#25,#32 SERIES

COLLET MUST BE ASSEMBLED INTO THE CLAMPING NUT BEFORE INSERTING INTO THE CHUCK

DIN6388 32#
OZ-32

■ RANGE SIZE:6-32(1/4″-1 1/4″)
■ D:43.7 ■ L:60 ■ TAPER:1:10
■ WEIGHT:0.25KGS

ORDER NO.	MM SIZE	CODE NO.
OZ-3206	6.0	3100-201
OZ-3207	7.0	3100-202
OZ-3208	8.0	3100-203
OZ-3209	9.0	3100-204
OZ-3210	10	3100-205
OZ-3211	11	3100-206
OZ-3212	12	3100-207
OZ-3213	13	3100-208
OZ-3214	14	3100-209
OZ-3215	15	3100-210
OZ-3216	16	3100-211
OZ-3217	17	3100-212
OZ-3218	18	3100-213
OZ-3219	19	3100-214
OZ-3220	20	3100-215
OZ-3221	21	3100-216
OZ-3222	22	3100-217
OZ-3223	23	3100-218
OZ-3224	24	3100-219
OZ-3225	25	3100-220
OZ-3226	26	3100-221
OZ-3227	27	3100-222
OZ-3228	28	3100-223
OZ-3229	29	3100-224
OZ-3230	30	3100-225
OZ-3231	31	3100-226
OZ-3232	32	3100-227

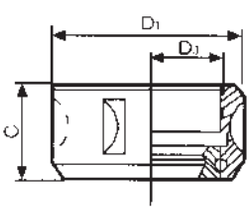
ORDER NO.	INCH SIZE	CODE NO.
OZ-3233	1/4″	3100-228
OZ-3234	5/16″	3100-229
OZ-3235	3/8″	3100-230
OZ-3236	7/16″	3100-231
OZ-3237	1/2″	3100-232
OZ-3238	9/16″	3100-233
OZ-3239	5/8″	3100-234
OZ-3240	11/16″	3100-235
OZ-3241	3/4″	3100-236
OZ-3242	13/16″	3100-237
OZ-3243	7/8″	3100-238
OZ-3244	15/16″	3100-239
OZ-3245	1″	3100-240
OZ-3246	1-1/8″	3100-241
OZ-3247	1-1/4″	3100-242

NEW ■ DIN 6388 16#
■ OZ-16 COLLET

ORDER NO.	MM SIZE	CODE NO.
OZ-1602	2.0	3100-001
OZ-1603	3.0	3100-002
OZ-1604	4.0	3100-003
OZ-1605	5.0	3100-004
OZ-1606	6.0	3100-005
OZ-1607	7.0	3100-006
OZ-1608	8.0	3100-007
OZ-1609	9.0	3100-008
OZ-1610	10	3100-009
OZ-1611	11	3100-010
OZ-1612	12	3100-011
OZ-1613	13	3100-012
OZ-1614	14	3100-013
OZ-1615	15	3100-014
OZ-1616	16	3100-015

DIN 6388 Nuts & Wrench

BALL BEARING, NUTS FOR COLLETS DIN6388, TYPE A



Unit:mm

ORDER NO.	C	D1	D3	COLLETS	WEIGHT kgs	CODE NO.
OZ-25N	30	60	M48X2	OZ-25	0.3	3100-301
OZ-32N	33	72	M60X2.5	OZ-32	0.7	3100-302

WRENCH FOR COLLETS DIN6388 TYPE A

Unit:mm

ORDER NO.	D1	COLLETS	WEIGHT kgs	CODE NO.
OZ-25W	60	OZ-25	0.35	3100-310
OZ-32W	72	OZ-32	0.4	3100-311

Milling Collet Chuck

OZ-25
COLLET HOLDER WITH BT-SHANK

DIN 6388 # 25 SERIES MAS
403 BT-SHANK

ORDER NO.	TAPER	DIN 6388	L	DRAW BAR	WEIGHT KGS	CODE NO.
VB-BT40	BT40	#25	80	M16X2.0P	1.7	3101-009
VB-BT50	BT50	#25	100	M24X3.0P	4.6	3101-010

Milling Collet Chuck Kit

Including Shank, full set of collets, wrench and case.

METRIC COLLET SYSTEM

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-241	BT40	7	4.4	3101-117
VB-242		15	5.9	3101-118
VB-251	BT50	7	7.5	3101-119
VB-252		15	9.5	3101-120

CONTENT COLLET SET SIZE

METRIC RANGE SET SIZE
7PCS:6, 8, 10, 12, 16, 20, 25mm
15PCS:3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 18, 20, 25mm

INCH COLLET SET SIZE

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-231	BT40	7	4.4	3101-121
VB-232		15	5.9	3101-122
VB-233	BT50	7	7.5	3101-123
VB-234		15	9.5	3101-124

INCH RANGE SET SIZE
7PCS:1/4″,5/16″,3/8″,1/2″,5/8″,3/4″,1″
15PCS:1/8″,3/16″,1/4″,5/16″,3/8″,7/16″,1/2″,9/16″,5/8″,
11/16″,3/4″,13/16″,7/8″,15/16″,1″

Milling Collet Chuck

COLLET HOLDER WITH BT-SHANK **DIN 6388 # 32 SERIES**

OZ-32 MAS 403

ORDER NO.	TAPER	DIN 6388	L	DRAW BAR	WEIGHT KGS	CODE NO.
VB-226	BT40-OZ-32	#32	90	M16X2.0P	2.3	3102-003
VB-227	BT50-OZ-32	#32	100	M24X3.0P	5.1	3102-004
VB-228			150	M24X3.0P	6.8	3102-005

Milling Collet Chuck Kit

Including Shank, full set of collets, wrench and case.

#32 SERIES BT-TYPE
MAS 403 BT-SHANK

METRIC COLLET SYSTEM SET

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-243	BT40	8	7.4	3102-109
VB-244		15	9.4	3102-110
VB-253	BT50	8	10	3102-111
VB-254		15	12	3102-112

CONTENT COLLET SET SIZE

METRIC RANGE SET SIZE
8PCS:6, 8, 10, 12, 16, 20, 25, 32mm
15PCS:6, 8, 9, 10, 12, 13, 14, 15, 16, 18, 20, 22, 25, 26, 30, 32mm

INCH COLLET SYSTEM SET

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-256	BT40	10	7.4	3102-113
VB-257		15	9.4	3102-114
VB-258	BT50	10	10	3102-115
VB-259		15	12	3102-116

INCH RANGE SET SIZE
10PCS:1/4",5/16",3/8",1/2",5/8",3/4",7/8",1",1-1/8",1-1/4"
15PCS:1/4",5/16",3/8",7/16",1/2",9/16",5/8",11/16",3/4"
13/16",7/8",15/16",1",1-1/8",1-1/4"

Milling Collet Chuck

COLLET HOLDER WITH ISO-SHANK **DIN 6388 # 32 SERIES**
OZ-32 **DIN 2080 NT-SHANK**

ORDER NO.	TAPER	DIN 6388	DRAW BAR	WEIGHT KGS	CODE NO.
VB-130	NT30	#32	1.M12X1.75P 2.1/2″-12W	2	3102-006
VB-131	NT40	#32	1.M16X2.0P 2.5/8″-11W	2.2	3102-001
VB-132	NT50	#32	1.M24X3.0P 2.1″-8W	3.9	3102-002

Milling Collet Chuck Kit

Including Shank, full set of collets, wrench and case.

OZ-32 DIN 6388

METRIC COLLET SYSTEM

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-121	NT40	8	7.5	3102-101
VB-121B	NT40	15	9.2	3102-102
VB-122	NT50	8	9.8	3102-103
VB-122B	NT50	15	11.8	3102-104
VB-123	NT30	8	7	3102-090
VB-123B	NT30	15	9	3102-091
VB-124	MTB5	8	8	3102-092
VB-124B	MTB5	15	10	3102-093

CONTENT COLLET SET SIZE

METRIC RANGE SET SIZE
8PCS:6, 8, 10, 12, 16, 20, 25, 32mm
15PCS:6, 7, 8, 9, 10, 11, 12, 13, 16, 18, 20, 25, 26,30, 32mm

INCH COLLET SYSTEM

ORDER NO.	TAPER	PCS/SET	WEIGHT KGS	CODE NO.
VB-162	NT30	10	7	3102-094
VB-162B	NT30	15	9	3102-095
VB-163	NT40	10	7.2	3102-105
VB-164	NT40	15	9.2	3102-106
VB-165	NT50	10	9.8	3102-107
VB-166	NT50	15	11.8	3102-108
VB-167	MTB5	10	8	3102-096
VB-167B	MTB5	15	10	3102-097

INCH RANGE SET SIZE
10PCS:1/4″,5/16″,3/8″,1/2″,5/8″,3/4″,7/8″,1″,1-1/8″,1-1/4″
15PCS:1/4″,5/16″,3/8″,7/16″,1/2″,9/16″,5/8″,11/16″,3/4″,
13/16″,7/8″,15/16″,1″,1-1/8″,1-1/4″

Milling Collet Chuck

COLLET HOLDER WITH DIN 69871 & CAT TPE

DIN 6388 # 25, #32 SERIES

DIN 69871A & CAT SHANK

ORDER NO.	TAPER	DIN 6388	DRAW BAR	WEIGHT KGS	CODE NO.
VB-261	SK40-OZ25-80L	#25	M16X2.0P	1.6	3101-011
VB-262	SK50-OZ25-100L		M24X3.0P	4.2	3101-012
VB-263	CAT40-OZ25-3″L		5/8″-11W	1.9	3101-013
VB-264	CAT50-OZ25-3 1/2″L		1″-8W	4	3101-014
VB-265	SK40-OZ32-80L	#32	M16X2.0P	2.3	3102-011
VB-266	SK50-OZ32-100L		M24X3.0P	5	3102-012
VB-267	CAT40-OZ32-3″L		5/8″-11W	2.3	3102-013

Milling Collet Chuck Kit

Including Shank, full set of collets, wrench and case.

METRIC COLLET SYSTEM SET DIN69871A SK-TYPE WITH #25,#32

ORDER NO.	COLLET HOLDER	TYPE	DIN 6388	RANGE	SET PCS	KGS	CODE NO.
VB-271	SK40-OZ25-80L	SK40	#25	3.0-25	15PCS	5.7	3101-125
VB-272	SK40-OZ25-80L		#25	6.0-25	7PCS	4.2	3101-126
VB-273	SK40-OZ32-90L		#32	6.0-32	15PCS	9.2	3101-127
VB-274	SK40-OZ32-90L		#32	6.0-32	8PCS	7.2	3101-128
VB-275	SK50-OZ25-100L	SK50	#25	3.0-25	15PCS	9.3	3101-129
VB-276	SK50-OZ25-100L		#25	6.0-25	7PCS	7.3	3101-130
VB-277	SK50-OZ32-100L		#32	6.0-32	15PCS	11.8	3102-117
VB-278	SK50-OZ32-100L		#32	6.0-32	8PCS	9.8	3102-118

INCH COLLET SYSTEM SET CAT-TYPE WITH #25,#32

ORDER NO.	COLLET HOLDER	TYPE	DIN 6388	RANGE	SET PCS	KGS	CODE NO.
VB-281	CAT40-OZ25-3″L	CAT40	#25	1/8″-1″	15PCS	5.7	3101-131
VB-282	CAT40-OZ25-3″L		#25	1/4″-1″	7PCS	4.2	3101-132
VB-286	CAT40-OZ32-3″L		#32	1/4″-1 1/4″	15PCS	9.2	3102-119
VB-287	CAT40-OZ32-3″L		#32	1/4″-1 1/4″	10PCS	7.2	3102-120
VB-288	CAT50-OZ25-3 1/2″L	CAT50	#25	1/8″-1″	15PCS	9.3	3101-133
VB-289	CAT50-OZ25-3 1/2″L		#25	1/4″-1″	7PCS	7.3	3101-134
VB-290	CAT50-OZ32-3 1/2″L		#32	1/4″-1 1/4″	15PCS	11.8	3102-121
VB-291	CAT50-OZ32-3 1/2″L		#32	1/4″-1 1/4″	10PCS	10	3102-122

Posi-Lock Milling Collet Chuck

COLLET HOLDER WITH MT, R-8, NT TAPER SHANK
POSI-LOCK COLLET TYPE

ORDER NO.	TAPER	WEIGHT KGS	DRAW BAR		CODE NO.
VC-115	MT2	0.7	1.M10x1.5	2.3/8″-16	3203-001
VC-116	MT3	0.9	1.M12x1.75 3.3/8”-16	2.M10X1.5 4.1/2″-12	3203-002
VC-117	MT4	1	1.M16X2.0P	2.5/8″-11	3203-003
VC-118	R8	1	1.7/16”-20UNF		3203-004
VC-123	NT30	1	1.M12X1.75	2.1/2″-12	3203-005
VC-124	NT40	1.2	1.M16X2.0	2.5/8″-11	3203-006
VC-125	NT50	3	1.M24X3.0	2.1″-8	3203-007

EACH COLLET WEIGHT IS 0.09kgs

ORDER NO.	SIZE	CODE NO.
PLI- 1/4	1/4″	3203-130
PLI- 3/8	3/8″	3203-131
PLI- 1/2	1/2″	3203-132
PLI- 5/8	5/8″	3203-133
PLM- 6	6mm	3203-134
PLM- 10	10mm	3203-135
PLM- 12	12mm	3203-136
PLM- 16	16mm	3203-137

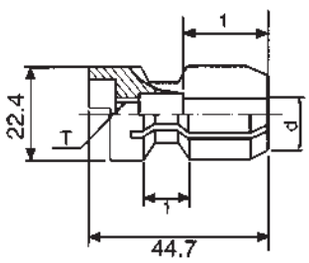
POSI-LOCK MILLING COLLET CHUCK KIT

Including Collet Chuck, Full Set of Collets and Wrench Compact design for maximum clearance. Gradual collet taper for powerful clamping action over entire collet. Fast & simple tool changing.

COLLET SET RANGE SIZE
METRIC 4PCS: 6,10,12,16mm
INCH 4PCS:1/4”,3/8”,1/2”,5/8”
SIZE 8PCS: 6,10,12,16mm, 1/4”,3/8”,1/2”,5/8”

ORDER NO.	TYPER	DRAW BAR	COLLET SIZE	COLLET PCS	WEIGHT KGS	CODE NO.
VC-101	MT2	1. M10x1.5P 2. 3/8″-16	METRIC	4	1.8	3203-101
VC-101I			INCH	4	1.8	3203-102
VC-101A			MM+INCH	8	2.3	3203-103
VC-102	MT3	1. M10x1.5P 2. M12X1.75 3. 3/8″-16 4. 1/2″-12	METRIC	4	2	3203-104
VC-102I			INCH	4	2	3203-105
VC-102A			MM+INCH	8	5	3203-106
VC-103	MT4	1. M16x2.0P 2. 5/8″-11	METRIC	4	2	3203-107
VC-103I			INCH	4	2	3203-108
VC-103A			MM+INCH	8	2.5	3203-109
VC-104	R8	1. 7/16″-20UNF	METRIC	4	2.2	3203-110
VC-104I			INCH	4	2	3203-111
VC-104A			MM+INCH	8	2.5	3203-112
VC-105	NT30	1. M12x1.75P 2. 1/2″-12	METRIC	4	2	3203-113
VC-105I			INCH	4	2	3203-114
VC-105A			MM+INCH	8	2.5	3203-115
VC-106	NT40	1. M16x2.0P 2. 5/8″-11	METRIC	4	2.3	3203-116
VC-106I			INCH	4	2.3	3203-117
VC-106A			MM+INCH	8	2.8	3203-118
VC-107	NT50	1. M24x3.0P 2. 1″-8	METRIC	4	4.3	3203-119
VC-107I			INCH	4	4.3	3203-120
VC-107A			MM+INCH	8	4.8	3203-121

COLLET SIZE
FOR POSI-LOCK



INDIVIDUAL UNIT

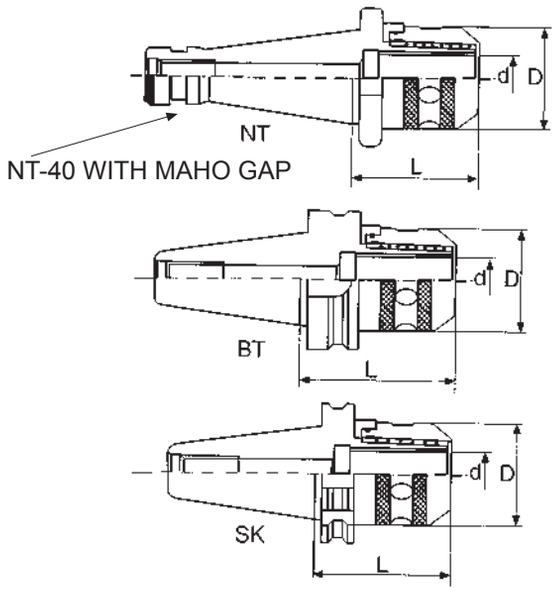
ORDER NO.	Q’TY	T	d COLLET SIZE
PL I - □	1PC	5/8″-20TPI	Ø1/4″,3/8″,1/2″,5/8″
PLM - □	1PC	M16-1.25P	Ø6,10,12,16mm

FULL SET

ORDER NO.	COLLET SIZE	WEIGHT (KG)	CODE NO.
VC-111	4pcs - 6,10,12,16mm	0.36	3203-200
VC-112	4pcs - 1/4″,3/8″,1/2″,5/8″	0.36	3203-201
VC-113	8pcs - 6,10,12,16mm,1/4″,3/8″,1/2″,5/8″	0.72	3230-302

Multi-Lock Milling Chuck

COLLET HOLDER WITH ISO, BT & SK TAPER SHANK
STRAIGHT COLLET TYPE
C-32 C-42
DIN 2080,MAS 403 DIN 69871A
C-20,25,32,42 TYPE



ORDER NO.	TAPER	CHUCK	d	D	L	DRAW BAR	KGS	CODE NO.
VB-431	NT40	NT40-MC32-95L	32	75	95	5/8”-11	3	3202-001
VB-432		NT40-MC32-95L	32	75	95	M16x2.0P	3.1	3202-002
VB-433	NT50	NT50-MC32-100L	32	75	100	1”-8	4.8	3202-003
VB-434		NT50-MC32-100L	32	75	100	M24x3.0P	5.1	3202-004
VB-435A	BT40	BT40-MC32-105L	32	75	105	M16x2.0P	3.2	3202-005
VB-435B		BT40-MC32-150L	32	75	150	M16x2.0P	3.5	3202-020
VB-436	BT50	BT50-MC32-110L	32	75	110	M24x3.0P	5.2	3202-006
VB-437		BT50-MC32-150L	32	75	135	M24x3.0P	7	3202-007
VB-438	NT50	NT50-MC42-110L	42	87	110	1”-8	6	3202-008
VB-439		NT50-MC42-110L	42	87	110	M24x3.0P	6.1	3202-009
VB-440	BT50	BT50-MC42-115L	42	87	115	M24x3.0P	6.1	3202-010
VB-441		BT50-MC42-150L	42	87	140	M24x3.0P	7.8	3202-011
VB-442	SK-40	SK40-MC32-100L	32	75	100	M16x2.0P	3.1	3202-012
VB-443	SK-50	SK50-MC32-105L	32	75	105	M24x3.0P	5.3	3202-013
VB-444A	BT30	BT30-MC20-95	20	52	95	M12x1.75P	1.3	3202-014
VB-446A	BT40	BT40-MC20-80	20	52	80	M16x2.0P	3	3202-016
VB-446B		BT40-MC20-120	20	52	120	M16x2.0P	2.7	3202-017
VB-447A		BT40-MC25-90	25	58	90	M16x2.0P	4.5	3202-018
VB-447B		BT40-MC25-135	25	58	135	M16x2.0P	3.2	3202-019
VB-448A	NT30	NT30-MC20-80	20	52	80	1. M12X1.75P 2. 1/2”-12	1.5	3202-030
VB-448B		NT30-MC25-85	25	58	85	1. M12X1.75P 2. 1/2”-12	1.5	3202-031
VB-449A	NT40	NT40-MC20-80	20	52	80	1. M16X2.0P 2. 5/8”-11	2	3202-032
VB-449B		NT40-MC25-85	25	58	85	1. M16X2.0P 2. 5/8”-11	2	3202-033
VB-450	SK30	SK30-MC20-95	20	52	95	M12X1.75P	1.5	3202-034
VB-451A	SK40	SK40-MC20-80	20	52	80	M16X2.0P	2	3202-035
VB-451B		SK40-MC25-90	25	58	90	M16X2.0P	2	3202-036
VB-452	SK50	SK50-MC42-110	42	87	110	M24X3.0P	5.7	3202-037

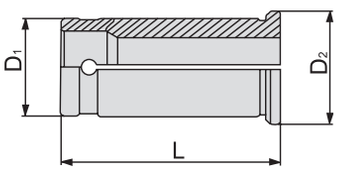
Multi-Lock Milling Chuck

MULTI-LOCK
MILLING CHUCK KIT
Including shank, full set of collets,
wrench and case.
DIN 2080 NT-SHANK
MAS 403 BT-SHANK
DIN 69871A SK-SHANK

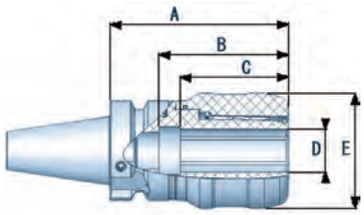
ORDER NO.	TAPER	CHUCK	COLLET	DRAW BAR	KGS	CODE NO.
VB-444I	NT40	NT40-MC32-95L	7PCS	5/8″-11	7	3202-101
VB-444		NT40-MC32-95L	7PCS	M16x2.0P	7	3202-102
VB-454I	NT50	NT50-MC32-100L	7PCS	1″-8	9	3202-103
VB-454		NT50-MC32-100L	7PCS	M24x3.0P	9	3202-104
VB-344A	BT40	BT40-MC32-105L	7PCS	M16x2.0P	7	3202-105
VB-344B		BT40-MC32-150L	7PCS	M16x2.0P	11.5	3202-118
VB-354A	BT50	BT50-MC32-110L	7PCS	M24x3.0P	9.5	3202-106
VB-354B		BT50-MC32-150L	7PCS	M24x3.0P	13	3202-119
VB-554	NT50	NT50-MC42-110L	8PCS	M24x3.0P	12	3202-107
VB-554I		NT50-MC42-110L	8PCS	1″-8	12	3202-108
VB-564A	BT50	BT50-MC42-115L	8PCS	M24x3.0P	12	3202-109
VB-564B		BT50-MC42-150L	8PCS	M24x3.0P	14	3202-109B
VB-565	SK-40	SK40-MC32-100L	7PCS	M16x2.0P	7	3202-110
VB-566	SK-50	SK50-MC32-105L	7PCS	M24x3.0P	9.5	3202-111
VB-567	BT-30	BT30-MC20-95	6PCS	M12x1.75P	6	3202-112
VB-569A	BT-40	BT40-MC20-80	6PCS	M16x2.0P	7	3202-114
VB-569B		BT40-MC20-120	6PCS	M16x2.0P	8	3202-115
VB-570A		BT40-MC25-90	7PCS	M16x2.0P	9.5	3202-116
VB-570B		BT40-MC25-135	7PCS	M16x2.0P	10.5	3202-117
VB-571	NT30	NT30-MC20-80L	6PCS	1. M12X1.75P 2. 1/2″-12	4	3202-120
VB-572		NT30-MC25-85L	7PCS	1. M12X1.75P 2. 1/2″-12	4	3202-121
VB-573	NT40	NT40-MC20-80L	6PCS	1. M16X2.0P 2. 5/8″-11	4.5	3202-122
VB-574		NT40-MC25-85L	7PCS	1. M16X2.0P 2. 5/8″-11	4.5	3202-123
VB-575	SK30	SK30-MC20-95L	6PCS	M12X1.75P	4	3202-124
VB-576	SK40	SK40-MC20-80L	6PCS	M16X2.0P	4.5	3202-125
VB-577		SK40-MC25-90L	7PCS	M16X2.0P	4.8	3202-126
VB-578	SK50	SK50-MC42-110L	8PCS	M24X3.0P	12	3202-127

C-20,25,32,42 Collet

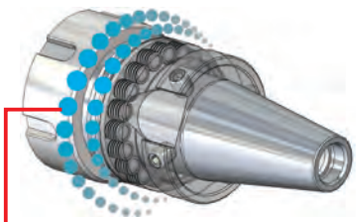
C-TYPE COLLET



Double Face Contact Multi Lock Milling Chuck

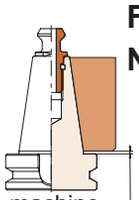


- High speed, rigid & precision.
- Improve immediately 100% of cutting efficiency and accuracy.
- A design and the performance were reformed completely.
- **Perfectly waterproof:** Contact places can be cleaned with air blow.
- **Fitting:** Longer cutter life with improved high rigidity.Less trouble due to over fitting.
- 15000 R.P.M.



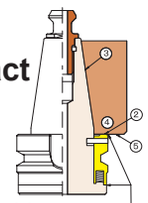
Compression spring
Cutting tools life is made to last long
Improvement of surface accuracy
Improvement of cutting condition
- There is an effect of attenuating the vibration.

FIG. 1
Before



Now commonly shank used on the machine has 2-3 mm space which can create vibration and result in rough surface.

FIG. 2
New type 2 face contact

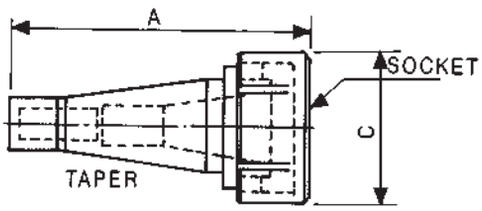


④after locking, shank and machine taper are totally 2 face contact, please see② flange,③taper,⑤machine.

ORDER NO	A	B	C	D	E	WEIGHT (kgs)	CODE NO.
BT40-MCD32-105B	105	100	70	32	68	2.5	3202-411
BT50-MCD32-105B	120	100	70	32	68	5.3	3202-412
BT50-MCD42-115B	135	110	80	42	83	6.5	3202-413

Quick-Change Tooling System

MILLING-QUICK CHANGE HOLDER



- QUICK-CHANG CHUCK TAPER ACCORDING TO DIN 2080 SPECIFICATION.
- EASY AND FAST CHANGING MILLING CHUCK(HOLDER).
- CHUCK TAPER PRECISELY MACHINED SUITABLE FOR HEAVY CUTTING.
- ALL THE HOLDER SIZE ARE SPECIAL FOR THIS QUICK-CHANGE TOOLING SYSTEM ONLY.

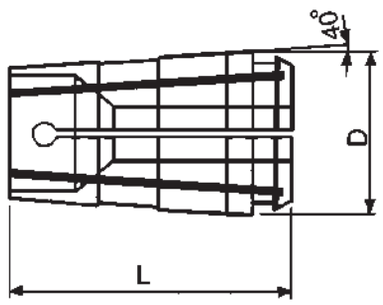
ORDER NO.	TAPER	SOCKET	A	C	WEIGHT KGS	CODE NO.
VD-101	NT30	NT30	144	70	1.3	3201-001
VD-102	NT40	NT30	150	70	2	3201-002
VD-103	NT40	NT40	181	89	2.4	3201-003
VD-105	NT50	NT40	175	89	3.8	3201-004
VD-106	R8	NT30	175	70	1.4	3201-005

MILLING-QUICK CHANGE SYSTEM KIT

ORDER NO.	TAPER	SOCKET	FULL SET	WEIGHT KGS	CODE NO.
VD-111	NT30	NT30	1.MILLING QUICK-CHANGE HOLDER 2.DRILL CHUCK HOLDER 3.MORSE TAPER HOLDER 4.FACE MILL HOLDER 5.DIN6388 #25 COLLET CHUCK HOLDER 6.DIN6388 #25 15PCS COLLET 7.WRENCH 8.WOODEN BOX	10	3201-006
VD-112	NT40	NT30		10.5	3201-007
VD-113	NT40	NT40		14	3201-008
VD-115	NT50	NT40		16	3201-009
VD-116	R8	NT30		10	3201-010

TG 100 Collet System

DIN 464E



■ RANGE SIZE:1/8″-63/64″

TG-100 ■ D:35 ■ L:61 ■ TAPER:4 ■ WEIGHT:0.2KGS

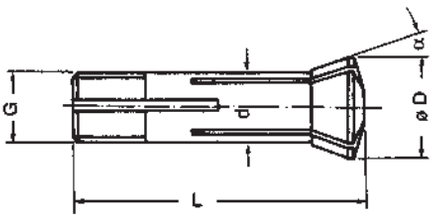
ORDER NO.	INCH	CODE NO.
TG10-01	1/8″	3204-001
TG10-02	3/6″	3204-002
TG10-03	1/4″	3204-003
TG10-04	5/16″	3204-004
TG10-05	3/8″	3204-005
TG10-06	7/16″	3204-006
TG10-07	1/2″	3204-007
TG10-08	9/16″	3204-008
TG10-09	5/8″	3204-009
TG10-10	11/16″	3204-010
TG10-11	3/4″	3204-011
TG10-12	13/16″	3204-012
TG10-13	7/8″	3204-013
TG10-14	15/16″	3204-014
TG10-15	1″	3204-015
TG10-16	5/32″	3204-016
TG10-17	7/32″	3204-017
TG10-18	9/32″	3204-018
TG10-19	11/32″	3204-019
TG10-20	13/32″	3204-020
TG10-21	15/32″	3204-021
TG10-22	17/32″	3204-022
TG10-23	19/32″	3204-023
TG10-24	21/32″	3204-024
TG10-25	23/32″	3204-025
TG10-26	25/32″	3204-026
TG10-27	27/32″	3204-027
TG10-28	29/32″	3204-028
TG10-29	31/32″	3204-029

ORDER NO.	INCH	CODE NO.
TG10-30	9/64″	3204-030
TG10-31	11/64″	3204-031
TG10-32	13/64″	3204-032
TG10-33	15/64″	3204-033
TG10-34	17/64″	3204-034
TG10-35	19/64″	3204-035
TG10-36	21/64″	3204-036
TG10-37	23/64″	3204-037
TG10-38	25/64″	3204-038
TG10-39	27/64″	3204-039
TG10-40	29/64″	3204-040
TG10-41	31/64″	3204-041
TG10-42	33/64″	3204-042
TG10-43	35/64″	3204-043
TG10-44	37/64″	3204-044
TG10-45	39/64″	3204-045
TG10-46	41/64″	3204-046
TG10-47	43/64″	3204-047
TG10-48	45/64″	3204-048
TG10-49	47/64″	3204-049
TG10-50	49/64″	3204-050
TG10-51	51/64″	3204-051
TG10-52	53/64″	3204-052
TG10-53	55/64″	3204-053
TG10-54	57/64″	3204-054
TG10-55	59/64″	3204-055
TG10-56	61/64″	3204-056
TG10-57	63/64″	3204-057

5C Collet System

5C RANGE

5C Collet



■L:87 ■D:37.5 ■d:31.75 ■Accuracy: ±0.02mm
■α:10° ■WEIGHT:0.21KGS ■Hardness: HRC47°

ORDER NO.	Q'TY	RANGE SIZE
5C-□	1 PC	Ø 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25MM
5C-□	1 PC	Ø 1/8″, 3/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 9/16″, 5/8″, 11/16″, 3/4″, 13/16″, 7/8″, 15/16″, 1″

COMPLETE SET AVAILABLE SIZE

ORDER NO.	Q'TY	RANGE SIZE	PACKING	WEIGHT KGS	CODE NO.
VE-102	7PCS	6, 8, 10, 12, 16, 20, 25	CARTON	1.5	3205-100
VE-102I	7PCS	1/4″, 5/16″, 3/8″, 1/2″, 5/8″, 3/4″, 1′	CARTON	1.5	3205-101

EMERGENCY TYPE SOFT COLLET

ORDER NO.	MATERIAL	kgs	CODE NO.
VE-5CS	STEEL		3205-201
VE-5CB	BRASS	0.35	3205-202
VE-5CN	NYLON		3205-203

mm

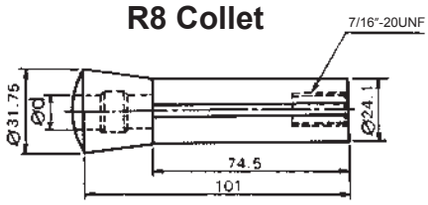
ORDER NO.	d	CODE NO.
5C-3	3	3205-001
5C-4	4	3205-002
5C-5	5	3205-003
5C-6	6	3205-004
5C-7	7	3205-005
5C-8	8	3205-006
5C-9	9	3205-007
5C-10	10	3205-008
5C-11	11	3205-009
5C-12	12	3205-010
5C-13	13	3205-011
5C-14	14	3205-012
5C-15	15	3205-013
5C-16	16	3205-014
5C-17	17	3205-015
5C-18	18	3205-016
5C-19	19	3205-017
5C-20	20	3205-018
5C-21	21	3205-019
5C-22	22	3205-020
5C-23	23	3205-021
5C-24	24	3205-022
5C-25	25	3205-023

inch

ORDER NO.	d	CODE NO.
5C-1/8	1/8″	3205-024
5C-3/16	3/16″	3205-025
5C-1/4	1/4″	3205-026
5C-5/16	5/16″	3205-027
5C-3/8	3/8″	3205-028
5C-7/16	7/16″	3205-029
5C-1/2	1/2″	3205-030
5C-9/16	9/16″	3205-031
5C-5/8	5/8″	3205-032
5C-11/16	11/16″	3205-033
5C-3/4	3/4″	3205-034
5C-13/16	13/16″	3205-035
5C-7/8	7/8″	3205-036
5C-15/16	15/16″	3205-037
5C-1	1″	3205-038

R8 Collet System

R8 Collet



■L:105■D:31.75 ■d:24.1 ■Accuracy: ±0.02mm
■G:7/16″-20UNF ■α:8°30′ ■WEIGHT:0.21KGS ■Hardness: HRC47°

ORDER NO.	Q'TY	RANGE SIZE
R8-□	1 PC	Ø 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 MM
R8-□	1 PC	Ø1/8″, 3/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 9/16″, 5/8″, 11/16″, 3/4″

COMPLETE SET AVAILABLE SIZE

ORDER NO.	Q'TY	RANGE SIZE	WEIGHT KGS	CODE NO.
VE-110	6PCS	6, 8, 10, 12, 16, 20 MM	1.5	3206-100
VE-114	7PCS	6, 8, 10, 12, 14, 16, 20 MM	1.5	3206-101

EMERGENCY TYPE SOFT COLLET

ORDER NO.	Q'TY	RANGE SIZE	WEIGHT KGS	CODE NO.
VE-109I	5PCS	1/4″, 3/8″, 1/2″, 5/8″, 3/4″,	1.1	3206-102
VE-110I	6PCS	1/4″, 5/16″, 3/8″, 1/2″, 5/8″, 3/4″	1.5	3206-103
VE-114I	7PCS	3/16″, 1/4″, 5/16″, 3/8″, 1/2″, 5/8″, 3/4″	1.5	3206-104

mm

ORDER NO.	d	CODE NO.
R8-3	3	3206-001
R8-4	4	3206-002
R8-5	5	3206-003
R8-6	6	3206-004
R8-7	7	3206-005
R8-8	8	3206-006
R8-9	9	3206-007
R8-10	10	3206-008
R8-11	11	3206-009
R8-12	12	3206-010
R8-13	13	3206-011
R8-14	14	3206-012
R8-15	15	3206-013
R8-16	16	3206-014
R8-17	17	3206-015
R8-18	18	3206-016
R8-19	19	3206-017
R8-20	20	3206-018

inch

ORDER NO.	d	CODE NO.
R8-1/8	1/8″	3206-019
R8-3/16	3/16″	3206-020
R8-1/4	1/4″	3206-021
R8-5/16	5/16″	3206-022
R8-3/8	3/8″	3206-023
R8-7/16	7/16″	3206-024
R8-1/2	1/2″	3206-025
R8-9/16	9/16″	3206-026
R8-5/8	5/8″	3206-027
R8-11/16	11/16″	3206-028
R8-3/4	3/4″	3206-029

U2 Collet System

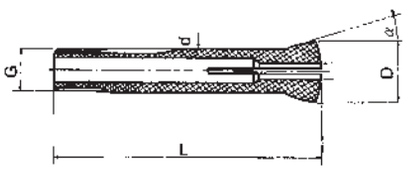
NO.1 U2 COLLET RANGE SIZE 3~16mm
NO.2 U2 COLLET RANGE SIZE 18~25mm

NO.1

■L:120 ■D:28 ■d:20 ■G:2.0P ■Accuracy: ±0.02mm
■α:17°30′ ■WEIGHT:0.18KGS ■Hardness: HRC47°

ORDER NO.	Q'TY	RANGE SIZE
VE-U2-□	1 PC	NO.1 Ø 1.5, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,16 NO.2 Ø 18, 20, 25MM
VE-U2-□	1 PC	Ø 1/8″, 3/16″, 1/4″, 5/16″, 3/8″, 1/2″, 5/8″

NO.2



mm

ORDER NO.	d	CODE NO.
VE-U2-1.5	1.5	3207-026
VE-U2-2	2	3207-027
VE-U2-3	3	3207-001
VE-U2-4	4	3207-002
VE-U2-5	5	3207-003
VE-U2-6	6	3207-004
VE-U2-7	7	3207-005
VE-U2-8	8	3207-006
VE-U2-9	9	3207-007

mm

ORDER NO.	d	CODE NO.
VE-U2-10	10	3207-008
VE-U2-11	11	3207-009
VE-U2-12	12	3207-010
VE-U2-13	13	3207-011
VE-U2-14	14	3207-012
VE-U2-15	15	3207-013
VE-U2-16	16	3207-014
VE-U2-18	18	3207-015
VE-U2-20	20	3207-016
VE-U2-25	25	3207-017

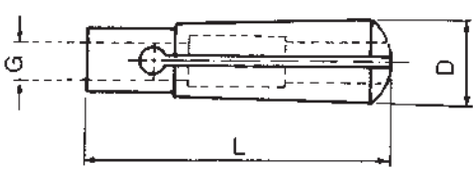
inch

ORDER NO.	d	CODE NO.
VE-U2-1/8	1/8″	3207-018
VE-U2-3/16	3/16″	3207-019
VE-U2-1/4	1/4″	3207-020
VE-U2-5/16	5/16″	3207-021
VE-U2-3/8	3/8″	3207-022
VE-U2-1/2	1/2″	3207-023
VE-U2-5/8	5/8″	3207-024

MT3 Collet System

■D:24.1 ■L:87 ■WEIGHT:0.18KGS
■DRAW BAR SIZE: G1.M12X1.75P
G2.M10X1.5P
G3.1/2″-12
G4.3/8″-16

ORDER NO.	Q'TY	RANGE SIZE	DRAW BAR SIZE
MT3-□	1 PC	Ø 4, 6, 8, 10, 12, 16, 20MM	G1,G2
MT3-□	1 PC	Ø 1/8″, 1/4″, 3/8″, 1/2″, 5/8″, 3/4″	G3,G4



mm

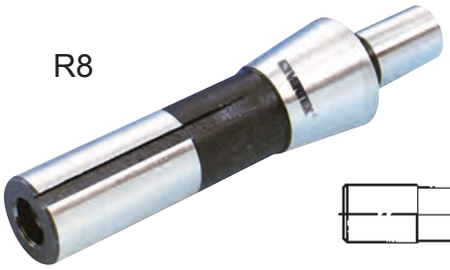
ORDER NO.	d	CODE NO.
MT3-4	4	3208-100
MT3-6	6	3208-101
MT3-8	8	3208-102
MT3-10	10	3208-103
MT3-12	12	3208-104
MT3-16	16	3208-105
MT3-20	20	3208-106

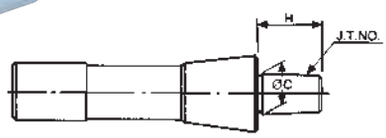
inch

ORDER NO.	d	CODE NO.
MT3-1/8	1/8″	3208-107
MT3-1/4	1/4″	3208-108
MT3-3/8	3/8″	3208-109
MT3-1/2	1/2″	3208-110
MT3-5/8	5/8″	3208-111
MT3-3/4	3/4″	3208-112

Drill Chucks Arbor

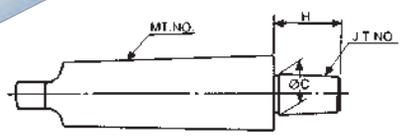
R8





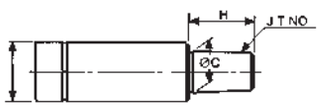
ORDER NO.	TAPER	JT NO.	C	H	WEIGHT (kg)	CODE NO.
VJ-121	R8	JT1	9.754	18	0.5	3209-001
VJ-122		JT2	13.94	20	0.5	3209-002
VJ-123		JT6	17.17	26	0.5	3209-003
VJ-124		B16	15.733	24	0.5	3209-004

MT3.4.5



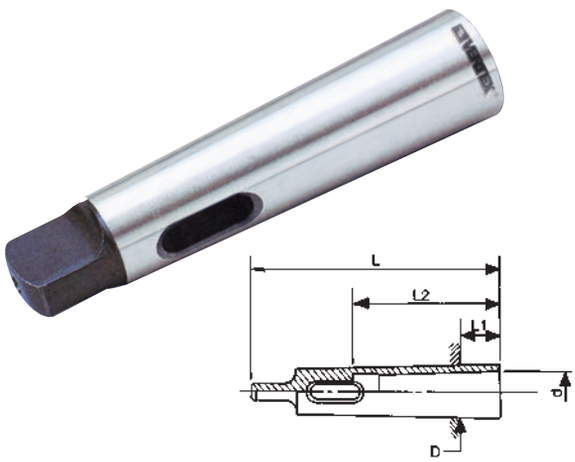
ORDER NO.	TAPER	JT NO.	C	H	WEIGHT (kg)	CODE NO.
VJ-131	MT3	JT6	17.17	26	0.4	3209-030
VJ-132	MT4	JT6	17.17	26	0.7	3209-031
VJ-133	MT5	JT6	17.17	26	1.6	3209-032
VJ-134	MT3	B16	15.733	24	0.3	3209-033

C20.25.32



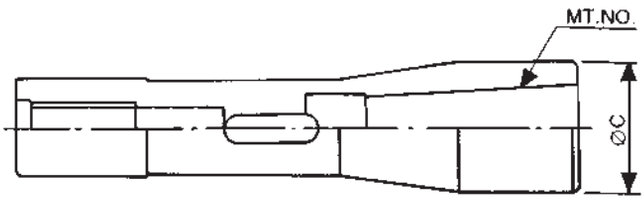
ORDER NO.	TAPER	JT NO.	C	H	WEIGHT (kg)	CODE NO.
VJ-141	C20	JT6	17.17	26	0.2	3209-060
VJ-142	C25	JT6	17.17	26	0.3	3209-061
VJ-143	C32	JT6	17.17	26	0.5	3209-062

Morse Taper Sleeve



ORDER NO.	I.D.xO.D.	D	d	L	l1	l2	WEIGHT (kg)	CODE NO.
VQ-101	MT2xMT3	23.825	17.780	112	18	67	0.2	3210-001
VQ-102	MT2xMT4	31.267	17.780	124	6.5	67	0.5	3210-002
VQ-103	MT2xMT5	44.399	17.780	156	6.5	67	1.4	3210-003
VQ-105	MT3xMT4	31.267	23.825	140	22.5	84	0.4	3210-005
VQ-106	MT3xMT5	44.399	23.825	156	6.5	84	1.3	3210-006
VQ-107	MT3xMT6	63.348	23.825	218	8	84	4	3210-007
VQ-108	MT4xMT5	44.399	31.267	171	21.5	107	1	3210-008
VQ-109	MT4xMT6	63.348	31.267	218	8	107	3.7	3210-009
VQ-110	MT5xMT6	63.348	44.399	218	8	133	2.9	3210-010

R8 With Morse Taper Sleeve



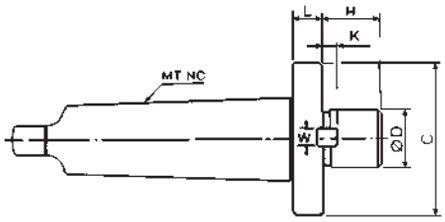
ORDER NO.	SHANK	SIZE	MT NO.	WEIGHT (kg)	CODE NO.
VQ-122	R8	R8-MT2	MT2	0.4	3211-001
VQ-123	R8	R8-MT3	MT3	0.5	3211-002

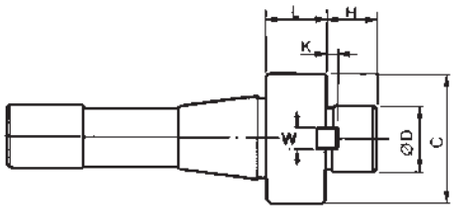
Face Mill Arbor

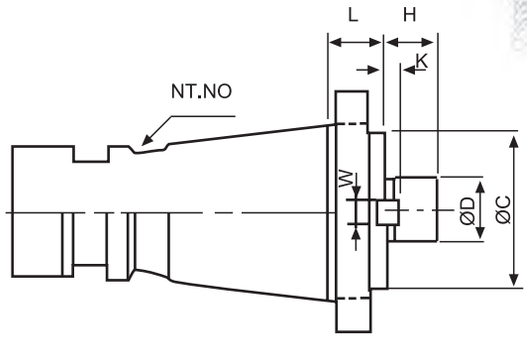
NT30, 40, 50, R8, MT3, 4 **DIN 2080/ISO SHANK**

NT40 WITH
MAHO GAP

NT30







MATERIAL:SCM-21 HARDNESS:HRC 50°-55°

Squareness of mounting surface:Less than 0.0002″(0.005M/M)
Deflection in shaft and taper:Less than 0.0002″(0.005M/M)

INCH FMA TYPE

ORDER NO.	TAPER	SHAFT SIZE				MOUNTING SIZE		WEIGHT (kg)	CODE NO.
		D	H	W	K	C	L		
VF-101	NT30	25.4	20	9.57	5	65	20	0.7	3212-001
VF-102	NT30	31.75	23	12.75	7	73	20	1	3212-002
VF-103	NT30	38.1	22	15.90	9	82	20	1.1	3212-003
VF-104	NT40	25.4	20	9.57	5	65	20	1.2	3212-004
VF-105	NT40	31.75	22	12.75	7	73	20	1.5	3212-005
VF-106	NT40	38.1	23	15.90	9	82	20	1.8	3212-006
VF-109	NT50	25.4	20	9.57	5	65	20	3.2	3212-009
VF-110	NT50	31.75	22	12.75	7	73	20	3.3	3212-010
VF-111	NT50	38.1	23	15.90	9	82	20	3.6	3212-011
VF-112	NT50	50.8	24	19.05	10	95	20	4	3212-012
VF-114	R8	25.4	20	9.57	5	40	20	0.9	3212-014
VF-115	R8	31.75	22	12.75	7	53	20	1.2	3212-015
VF-116	MT-3	25.4	20	9.57	5	40	20	0.7	3212-016
VF-117	MT-4	25.4	20	9.57	5	40	20	1	3212-017

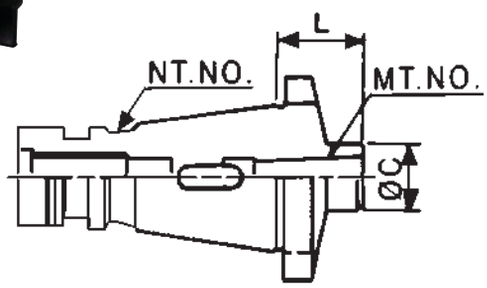
METRIC FMB TYPE

ORDER NO.	TAPER	SHAFT SIZE				MOUNTING SIZE		WEIGHT (kg)	CODE NO.
		D	H	W	K	C	L		
VF-120	NT30	22	18	9.57	5	40	20	0.7	3212-100
VF-121	NT30	27	20	12.75	7	53	20	0.8	3212-101
VF-122	NT30	32	23	15.90	7	63	20	1.1	3212-102
VF-123	NT40	22	18	9.57	5	40	20	1.2	3212-103
VF-124	NT40	27	20	12.75	7	53	20	1.3	3212-104
VF-125	NT40	32	23	15.90	7	63	20	1.4	3212-105
VF-126	NT40	40	26	19.05	8	85	20	1.9	3212-106
VF-127	NT40	60	32	25.40	5	128	24	4	3212-107
VF-128	NT50	22	18	9.57	5	40	20	3.1	3212-108
VF-129	NT50	27	20	12.75	7	53	20	3.3	3212-109
VF-130	NT50	32	23	15.90	7	63	20	3.5	3212-110
VF-131	NT50	40	26	19.05	8	85	20	3.7	3212-111
VF-132	NT50	60	32	25.40	5	128.57	24	5.4	3212-112
VF-134	R8	22	18	9.57	5	40	20	0.9	3212-113
VF-135	R8	27	20	12.75	7	53	20	1	3212-114
VF-136	MT-3	27	20	9.57	7	53	20	0.7	3212-115
VF-137	MT4	27	20	9.57	7	53	20	1.1	3212-116

Morse Taper Adapter

NT-30, 40, 50, R8, MT3, 4 **DIN 2080/ISO SHANK**

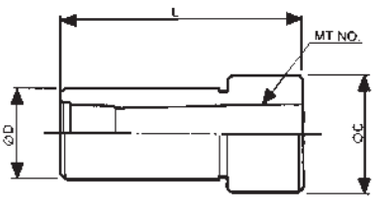
MORSE TAPER ADAPTER WITH STRAIGHT SHANK



STANDARD TYPE

ORDER NO.	TAPER	TYPE	C	L	WEIGHT (kgs)	CODE NO.
VI-101	NT30	MT1	25	25	0.6	3211-030
VI-102	NT30	MT2	32	50	0.6	3211-031
VI-103	NT30	MT3	35	65	0.7	3211-032
VI-104	NT40	MT1	25	30	0.9	3211-033
VI-105	NT40	MT2	32	30	1	3211-034
VI-106	NT40	MT3	40	70	1.2	3211-035
VI-107	NT40	MT4	50	90	1.5	3211-036
VI-108	NT50	MT2	32	30	2.8	3211-037
VI-109	NT50	MT3	40	30	2.7	3211-038
VI-110	NT50	MT4	50	45	3.2	3211-039
VI-111	NT50	MT5	65	105	3.7	3211-040

PLEASE NOTIFY THE DRAW BAR THREAD SIZE WHEN ORDERING.

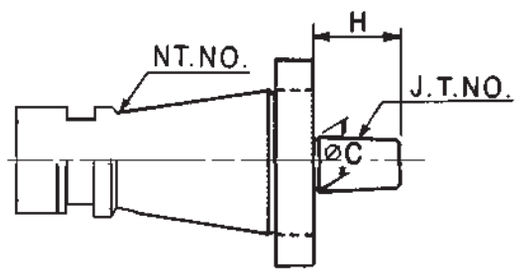


STANDARD TYPE

ORDER NO.	TAPER	SIZE	D	MT NO	C	L	WEIGHT (kg)	CODE NO.
VI-131	C20	C20-MT1	20	MT1	27	60	0.2	3211-060
VI-132	C20	C20-MT2	20	MT2	27	70	0.2	3211-061
VI-133	C25	C25-MT1	25	MT1	33	60	0.3	3211-062
VI-134	C25	C25-MT2	25	MT2	33	70	0.2	3211-063
VI-135	C25	C25-MT3	25	MT3	33	90	0.2	3211-064
VI-136	C32	C32-MT1	32	MT1	37	60	0.4	3211-065
VI-137	C32	C32-MT2	32	MT2	37	70	0.4	3211-066
VI-138	C32	C32-MT3	32	MT3	37	90	0.4	3211-067

Jacobs Taper Drill Chuck Arbor

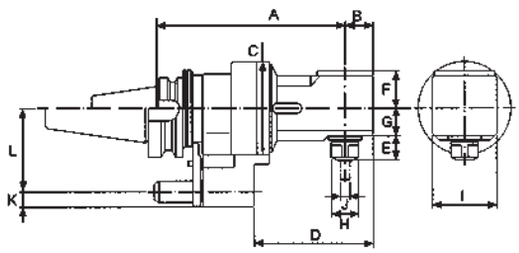
NT30, 40, 50-JT & B **DIN 2080/ISO SHANK**

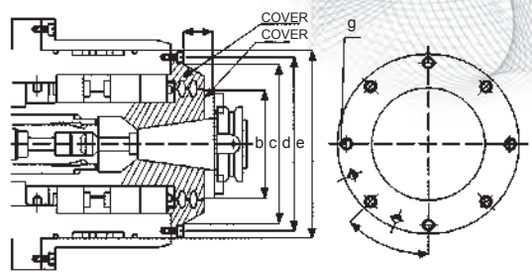


ORDER NO.	TAPER	JT NO	C	H	WEIGHT (kgs)	CODE NO.
VJ-103	NT30	JT6	17.17	26	0.6	3209-092
VJ-106	NT40	JT6	17.17	26	1	3209-095
VJ-109	NT50	JT6	17.17	26	3.2	3209-098

PLEASE NOTIFY THE DRAW BAR THREAD SIZE WHEN ORDERING.

Right Angle Heads For Machining Center





Please provide spindle dimension in metric for mounting

a:_____mm
b:_____mm
c:_____mm
d:_____mm
P.C.D For g

e:_____mm
f: _____mm
g:_____mm
thread ØD x pitch x holes number

- Compact body design is the best tool for internal processing.
- 6000 rpm high speed processing. Increases machining efficiency.
- Allow automatic tool changed. Increases productivity.

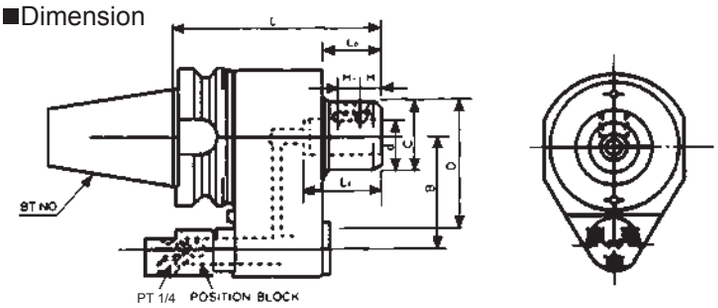
Concentricity:	0.002mm
Squareness:	10 Arc Second
Material:	FCD60~FCD65
R.P.M.:	Max. 6000RPM
Gear Ration:	1:1
Spindle Type:	BT
Standard Accessory:	27mm Wrench, ER Wrench, ER Nut

ORDER NO.	A	B	C	D	E	F	G	H	I	J	K	L	N.W.(KGS)	CODE NO.
VHA-BT40-ER20	192	29	95	122	28.5	38	28	28	66	1~13(ER20)	15.5	65	6.2	3500-020
VHA-BT50-ER20	203	29	95	122	28.5	38	28	28	66	1~13(ER20)	15.5	80/85	9.5	3500-021

Oil-Feed Holder / Slo

Coolant hole holder for straight shank
BT40,BT50

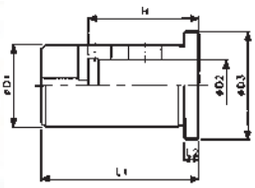
■Dimension



Unit:mm

ORDER NO.	d	L	B	C	D	L0	L1	H	H1	WEIGHT(kgs)	CODE NO.
BT40SLO32-150	32	150	65	53	90	52	60	15	15	4KGS	3214-001
BT40SLO40-150	40	150	65	70	90	52	70	19	18	4.6KGS	3214-002
BT50SLO32-150	32	150	80	54	100	42	60	15	15	7.1KGS	3214-003
BT50SLO40-150	40	150	80	64	100	52	70	19	18	7.8KGS	3214-004

Reducing sleeve for oil feed holder.



ORDER NO.	D1	D2	D3	L1	L2	H	WEIGHT(kg)	CODE NO.
OC32-20	32	20	42	63	6	48	0.4	3214-103
OC32-25		25				54	0.3	3214-104
OC40-25	40	25	50	63	6	54	0.6	3214-105
OC40-32		32				58	0.5	3214-106

Face Mill Arbor

BT30,40,50

BT-SHANK MAS 403

FIG. 1

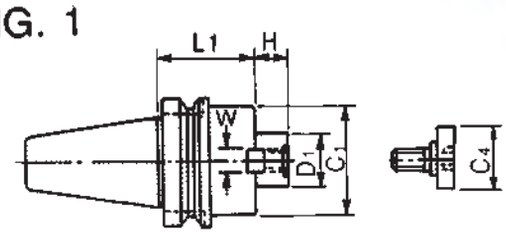
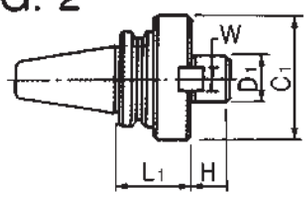
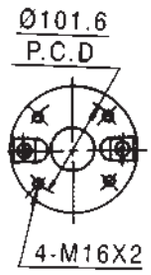


FIG. 2





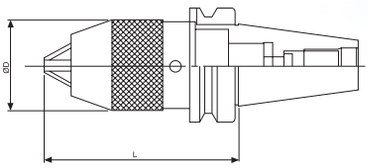
INCH FMA TYPE

ORDER NO.	TAPER	FIG	D1	L1	H	C1	W	C4	N.W. (KG)	CODE NO.
BT-101	BT30	1	25.4	50	22	45	9.5	33	1.0	3212-201
BT-103	BT40	1	25.4	45	22	60	9.5	33	1.6	3212-203
BT-105	BT40	1	25.4	90	22	60	9.5	33	1.6	3212-205
BT-106	BT40	1	31.75	45	30	70	12.7	40	1.8	3212-206
BT-108	BT40	1	31.75	90	30	70	12.7	40	2.8	3212-208
BT-109	BT40	1	38.1	60	34	85	15.9	50	2.5	3212-209
BT-111	BT50	1	25.4	45	22	60	9.5	33	4.2	3212-211
BT-112	BT50	1	25.4	105	22	60	9.5	33	4.9	3212-212
BT-113	BT50	1	25.4	150	22	60	9.5	33	6.2	3212-213
BT-114	BT50	1	31.75	45	30	70	12.7	40	4.0	3212-214
BT-115	BT50	1	31.75	75	30	70	12.7	40	4.8	3212-215
BT-116	BT50	1	31.75	105	30	70	12.7	40	5.6	3212-216
BT-117	BT50	1	38.1	45	34	85	15.9	50	4.6	3212-217
BT-118	BT50	1	38.1	75	34	85	15.9	50	5.6	3212-218
BT-119	BT50	1	50.8	45	36	95	19.05	65	4.8	3212-219
BT-121	BT50	1	47.625	75	38	128.57	25.4	-	7.9	3212-221

METRIC FMB TYPE

ORDER NO.	TAPER	FIG	D1	L1	H	C1	W	C4	N.W. (KG)	CODE NO.
BT-150	BT30	1	22	45	18	48	10	33	2.0	3212-267
BT-151	BT30	1	27	45	20	60	12	33	2.2	3212-268
BT-152	BT40	1	22	45	18	48	10	50	1.5	3212-269
BT-153	BT40	1	22	90	18	48	10	33	2.2	3212-270
BT-154	BT40	1	27	45	20	60	12	33	1.7	3212-271
BT-155	BT40	1	27	90	20	60	12	33	2.7	3212-272
BT-156	BT40	1	32	45	22	62	14	50	1.8	3212-273
BT-157	BT40	1	40	60	26	85	16	50	2.7	3212-274
BT-158	BT50	1	22	45	18	60	10	33	4.2	3212-275
BT-159	BT50	1	22	75	18	60	10	33	4.6	3212-276
BT-160	BT50	1	27	45	20	70	12	33	4.3	3212-277
BT-161	BT50	1	27	75	20	60	12	33	4.9	3212-278
BT-162	BT50	1	27	105	20	60	12	33	5.7	3212-279
BT-163	BT50	1	32	75	22	75	14	50	5.5	3212-280
BT-164	BT50	1	32	105	22	80	14	33	6.5	3212-281
BT-165	BT50	1	32	150	22	80	14	33	8.7	3212-282
BT-166	BT50	1	40	75	26	85	16	50	6	3212-283

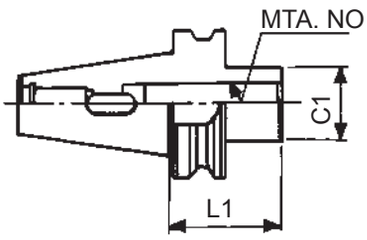
Drill Chuck Holder/APU



ORDER NO.	TAPER	ØD	KGS	CODE NO.
BT-180	BT30-APU08	37	1	3212-301
BT-181	BT30-APU13	50	1.4	3212-302
BT-182	BT40-APU08	37	1.5	3212-303
BT-183	BT40-APU13	50	2	3212-304
BT-184	BT40-APU16	58	2.5	3212-305
BT-186	BT50-APU13	50	4.7	3212-307
BT-188	BT50-APU16	58	4.8	3212-309

Morse Taper Adaptor

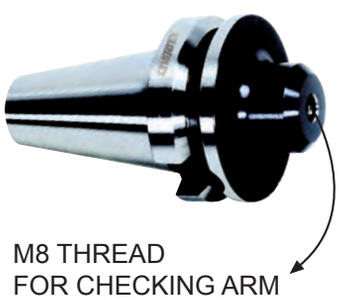
BT30,40,50-MTA,MTB **MAS 403 BT-SHANK**

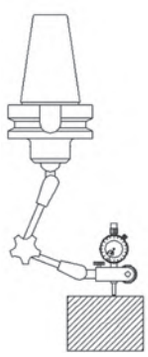


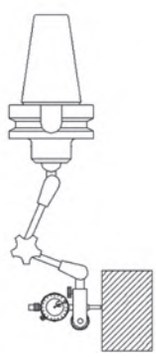
MTA TYPE (STANDARD TYPE)

ORDER NO.	TAPER	MT.NO.	L1	C1	WEIGHT(KG)	CODE NO.
BT-204	BT30	MT-2	60	32	0.6	3211-091
BT-207	BT30	MT-3	80	40	1.2	3211-092
BT-209	BT40	MT-1	50	25	1.1	3211-094
BT-212	BT40	MT-2	50	32	1.1	3211-095
BT-215	BT40	MT-3	75	40	1.3	3211-096
BT-218	BT40	MT-4	95	50	1.5	3211-097
BT-220	BT50	MT-1	45	25	3.5	3211-098
BT-223	BT50	MT-2	50	32	3.5	3211-099
BT-226	BT50	MT-3	65	40	3.6	3211-100
BT-229	BT50	MT-4	75	50	3.6	3211-101
BT-231	BT50	MT-5	105	65	4.2	3211-102

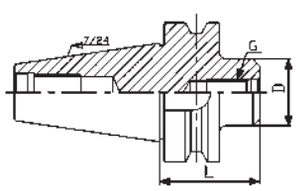
Lever Checking Holders



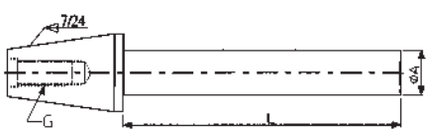




ORDER NO.	L	ØD	G	kgs	CODE NO.
BT40-M8	47	30	M8	1.3	3029-160
BT50-M8	58	30	M8		3029-161



Test Arbor

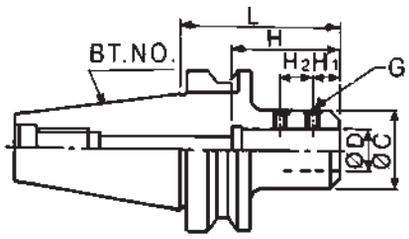


ORDER NO.	TAPER	G CAN FOR PULL STUD	A	L	KGS	CODE NO.
A50	BT-50	M24xP3.0	40	250	5.3	3405-412
A40	BT-40	M16xP2.0	40		3.9	3405-413
A30	BT-30	M12xP1.75	30		2.4	3405-414

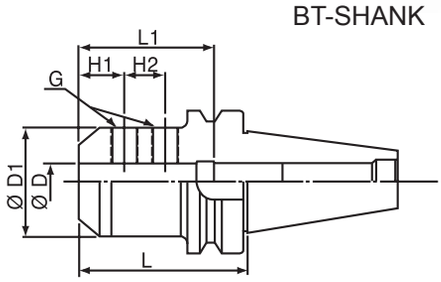
Sidelock End Mill Holder

BT 30, 40, 50-SLA **MAS 403**

WELDON TYPE



BT-SHANK

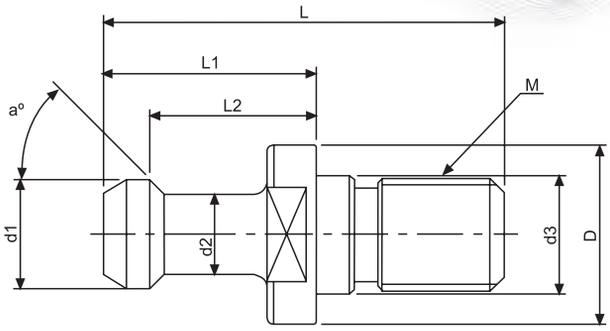


Unit:mm

ORDER NO.	SIZE	ØD	ØD1	L	L1	H1	H2	G	WEIGHT (kg)	CODE NO.
BT-436	BT30-SLA6-60	6	25	60	30	12	10	M6x1.0	0.7	3213-126
BT-437	BT30-SLA8-60	8	28	60	35	14	12	M8x1.25	0.7	3213-127
BT-438	BT30-SLA10-60	10	35	60	40	15	14	M8x1.25	0.7	3213-128
BT-439	BT30-SLA12-60	12	42	60	50	20	16	M12x1.5	0.8	3213-129
BT-440	BT30-SLA16-75	16	48	75	60	20	18	M12x1.5	0.9	3213-130
BT-441	BT30-SLA20-75	20	52	75	70	23	19	M12x1.5	1.2	3213-131
BT-442	BT40-SLA6-75	6	25	75	30	12	10	M6x1.0	1.2	3213-132
BT-443	BT40-SLA8-75	8	28	75	35	14	12	M8x1.25	1.3	3213-133
BT-444	BT40-SLA10-75	10	35	75	40	15	14	M8x1.25	1.4	3213-134
BT-445	BT40-SLA12-75	12	42	75	50	20	16	M12x1.5	1.5	3213-135
BT-446	BT40-SLA14-75	14	44	75	50	20	16	M12x1.5	1.5	3213-136
BT-447	BT40-SLA16-75	16	48	75	60	20	18	M12x1.5	1.6	3213-137
BT-448	BT40-SLA18-75	18	50	75	60	20	18	M12x1.5	1.6	3213-138
BT-449	BT40-SLA20-90	20	52	90	70	23	19	M12x1.5	1.9	3213-139
BT-450	BT40-SLA25-90	25	62	90	80	24	25	M18x1.5	2.2	3213-140
BT-451	BT40-SLA32-90	32	63	90	80	24	28	M20x1.5	2	3213-141
BT-452	BT40-SLA40-105	40	79	105	80	24	28	M20x1.5	3.2	3213-142
BT-453	BT40-SLA42-105	42	79	105	80	24	28	M20x1.5	3.1	3213-143
BT-454	BT50-SLA6-90	6	25	90	30	12	10	M6x1.0	3.9	3213-144
BT-455	BT50-SLA6-150	6	25	150	30	12	10	M6x1.0	4	3213-145
BT-456	BT50-SLA8-90	8	28	90	35	14	12	M8x1.25	3.7	3213-146
BT-457	BT50-SLA8-150	8	28	150	35	14	12	M8x1.25	4.2	3213-147
BT-458	BT50-SLA10-90	10	35	90	40	15	14	M8x1.25	4.2	3213-148
BT-459	BT50-SLA10-150	10	35	150	40	15	14	M8x1.25	4.3	3213-149
BT-460	BT50-SLA12-90	12	42	90	50	20	16	M12x1.5	4.2	3213-150
BT-461	BT50-SLA12-150	12	42	150	50	20	16	M12x1.5	4.9	3213-151
BT-462	BT50-SLA14-90	14	44	90	55	20	16	M12x1.5	4.2	3213-152
BT-463	BT50-SLA16-90	16	48	90	60	20	18	M12x1.5	4.3	3213-153
BT-464	BT50-SLA16-150	16	48	150	60	20	18	M12x1.5	5	3213-154
BT-465	BT50-SLA18-90	18	50	90	60	20	18	M12x1.5	4.3	3213-155
BT-467	BT50-SLA20-150	20	52	150	70	23	19	M12x1.5	4.5	3213-157
BT-468	BT50-SLA20-200	20	52	200	70	23	19	M12x1.5	6.4	3213-158
BT-470	BT50-SLA25-105	25	65	105	80	24	25	M18x1.5	5	3213-160
BT-474	BT50-SLA32-105	32	72	105	80	24	28	M20x1.5	5.3	3213-164
BT-477	BT50-SLA32-250	32	72	250	80	24	28	M20x1.5	9.8	3213-167
BT-478	BT50-SLA40-120	40	90	120	90	30	32	M20x1.5	6.5	3213-168
BT-479	BT50-SLA42-120	42	90	120	90	30	32	M20x1.5	6.7	3213-169

Pull Studs

BT 30, 40, 50 **FOR MAS 403**



THREAD GROUND

Unit:mm

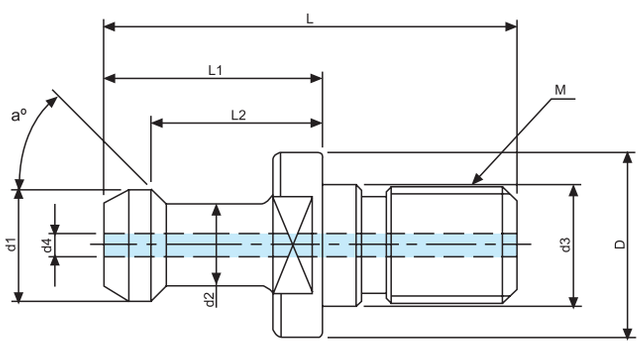
ORDER NO.	TAPER NO.	a°	L	L1	L2	D	d1	d2	d3	M	CODE NO.
BT-510	BT30X90°	90	43	23	18	16.5	11	7	12.5	M12	3215-007
BT-501	BT30X45°	45	43	23	18	16.5	11	7	12.5	M12	3215-008
BT-502	BT30X60°	60	43	23	18	16.5	11	7	12.5	M12	3215-009
BT-511	BT40X90°	90	60	35	28	23	15	10	17	M16	3215-010
BT-503	BT40X45°	45	60	35	28	23	15	10	17	M16	3215-011
BT-504	BT40X60°	60	60	35	28	23	15	10	17	M16	3215-012
BT-512	BT50X90°	90	85	45	35	38	23	17	25	M24	3215-013
BT-505	BT50X45°	45	85	45	35	38	23	17	25	M24	3215-014
BT-506	BT50X60°	60	85	45	35	38	23	17	25	M24	3215-015

Pull Studs

MAS 403
BT-40,50

FOR MAS 403

• With through hole for internal coolant

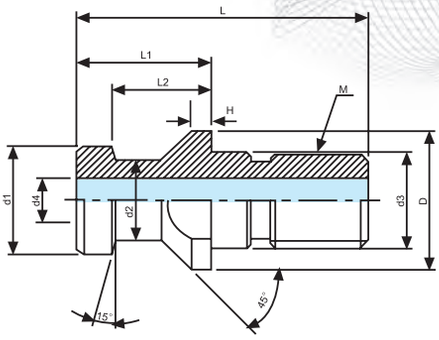


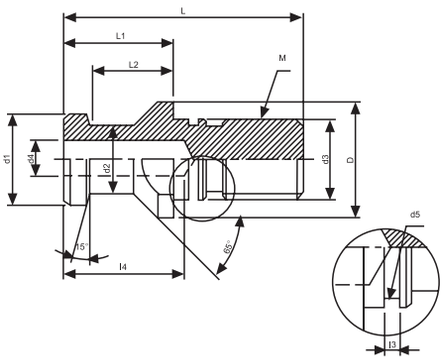
Unit:mm

ORDER NO.	TAPER NO.	a°	L	L1	L2	D	d1	d2	d3	d4	M	CODE NO.
BT-516	BT40X45°W	45	60	35	28	23	15	10	17	4	M16	3215-060
BT-517	BT40X60°W	60	60	35	28	23	15	10	17	4	M16	3215-061
BT-518	BT40X90°W	90	60	35	28	23	15	10	17	4	M16	3215-062
BT-519	BT50X45°W	45	85	45	35	38	23	17	25	7	M24	3215-063
BT-520	BT50X60°W	60	85	45	35	38	23	17	25	7	M24	3215-064
BT-521	BT50X90°W	90	85	45	35	38	23	17	25	7	M24	3215-065

Pull Studs

FOR DIN 69872





DIN 69872, (WITH THROUGH HOLE)-A TYPE

Unit:mm

ORDER NO.	TAPER NO.	L	L1	L2	D	d1	d2	d3	d4	M	H	CODE NO.
BT-522	DIN30-A	44	24	19	17	13	9	13		M12		3215-066
BT-523	DIN40-A	54	26	20	23	19	14	17	7	M16	9	3215-067
BT-524	DIN40-A-L	54	29	23	23	19	14	17	7	M16		3215-068
BT-525	DIN50-A	74	34	25	36	28	21	25	11.5	M14		3215-069

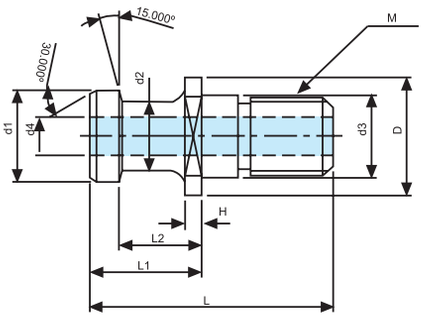
WITHOUT O-RING DIN69872-B TYPE

Unit:mm

ORDER NO.	TAPER NO.	L	L1	L2	l3	l4	D	d1	d2	d3	d4	M	CODE NO.
BT-526	DIN30-B	44	24	19	1.4		17	13	9	13		M12	3215-070
BT-527	DIN40-B	54	26	20	1.9	27	23	19	14	17	7	M16	3215-071
BT-528	DIN50-B	74	34	25	3	37	36	28	21	25	11.5	M24	3215-072

Pull Studs

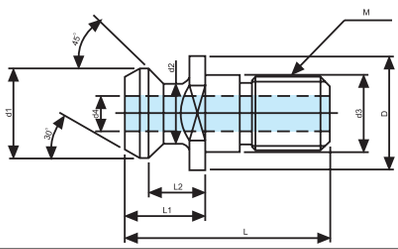
ISO-A TYPE FOR ISO/JIS 7388/2/A



Unit:mm

ORDER NO.	TAPER NO.	L	L1	L2	D	d1	d2	d3	d4	M	H	CODE NO.
BT-529	ISO40-A	54	26	20	23	29	24	27	7	M16	6	3215-073
BT-530	ISO50-A	74	34	25	36	28	21	25	11.5	M24		3215-074

ISO-B TYPE FOR ISO/JIS 7388/2/B

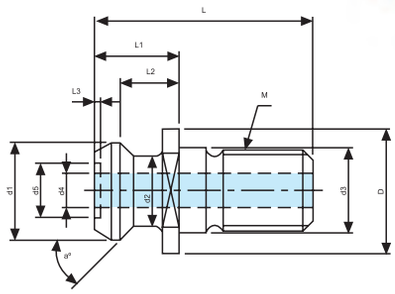


Unit:mm

ORDER NO.	TAPER NO.	L	L1	L2	D	d1	d2	d3	d4	M	CODE NO.
BT-531	ISO40-B	44.5	16.4	11.15	22.5	18.95	12.95	17	7.35	M16	3215-075
BT-532	ISO50-B	65.5	25.5	17.95	37	29.1	19.6	25	11.55	M24	3215-076

Pull Studs

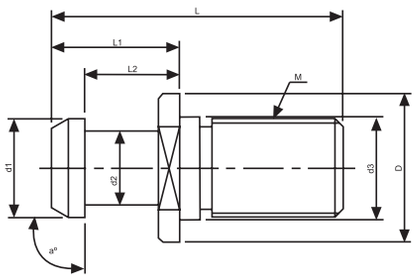
MAZAK FOR MAZAK MACHINE



Unit:mm

ORDER NO.	TAPER NO.	L	L1	L2	L3	D	d1	d2	d3	d4	d5	M	CODE NO.
BT-533	MAZAK BT50	65.2	25.2	17.58	1.8	37	28.95	20.83	25	10	16	M24	3215-077
BT-534	MAZAK BT40	44.1	19.1	14		22	18.8	12.45	17	7		M16	3215-078
BT-535	MAZAK CAT40	44.1	16.1	11		22	18.8	12.45	17	7		M16	3215-079

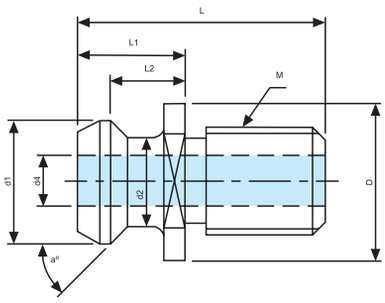
MITSUI FOR MITSUI MACHINE



Unit:mm

ORDER NO.	TAPER NO.	a°	L	L1	L2	D	d1	d2	d3	M	CODE NO.
BT-536	MITSUI BT40	90	50	25	18	23	15	10	17	M16	3215-080
BT-537	MITSUI BT50	90	71	31	23	36	24	18	25	M24	3215-081

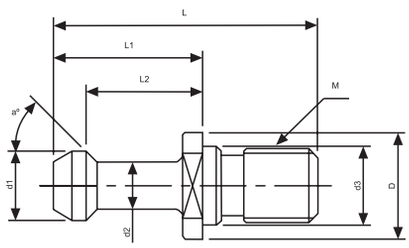
CAT FOR ANSI B5-50



Unit:mm

ORDER NO.	TAPER NO.	a°	L	L1	L2	D	d1	d2	d4	M	CODE NO.
BT-538	CAT40	45	38.1	16.2	11.2	23.8	18.8	12.4	7.1	5/8″	3215-082
BT-539	CAT50	45	58.4	25.4	17.8	36	28.9	20.8	11.8	1″	3215-083

CAT-BT FOR BT MACHINE



Unit:mm

ORDER NO.	TAPER NO.	a°	L	L1	L2	D	d1	d2	d3	M	CODE NO.
BT-540	CAT40X45°	45	57	32	25	23	15	10		5/8″	3215-084
BT-541	CAT40X60°	60	57	32	25	23	15	10		5/8″	3215-085
BT-542	CAT40X90°	90	57	32	25	23	15	10		5/8″	3215-086
BT-543	CAT50X45°	45	78.6	45	35.2	38	23	17		1″	3215-087
BT-544	CAT50X60°	60	78.6	45	35.2	38	23	17		1″	3215-088
BT-545	CAT50X90°	90	78.6	45	35.2	38	23	17		1″	3215-089
BT-546	CAT40X45°M	45	57	32	25	23	15	10	17	M16	3215-090
BT-547	CAT40X60°M	60	57	32	25	23	15	10	17	M16	3215-091
BT-548	CAT40X90°M	90	57	32	25	23	15	10	17	M16	3215-092

Complete NC Tooling Set

We recommend a complete set which is included tool holder, collet chuck, collet set, pull stud, tooling locking stand, edge finder for NC machining center. it is popular and suitable sale-mix in the market.

ORDER NO. VBT-30-0720 CODE NO. 3216-001 BT-30 WITH 7PCS. HOLDER & ER-20 COLLET

ITEM NO.	Descriptions	Figures	Quantity	Explanation
1	ER20 COLLET CHUCK BT30-ER20-60		3pcs.	For small Dia. End mill and Drills
2	MORSE TAPER ADAPTOR BT30-MTA1-50		1pc.	For drills with Morse taper Shank No.1.
3	MORSE TAPER ADAPTOR BT30-MTA2-60		1pc.	For drills with Morse taper Shank No.2.
4	END MILL HOLDER BT-30-SL12-60		1pc.	For straight shank end mill with Sidelock edge Dia. 12mm(WELDON Type)
5	END MILL HOLDER BT30-SL16-60		1pc.	For straight shank end mill with Sidelock edge Dia. 16mm(WELDON Type)
6	ER20 SPRING COLLET ER20-dØ		11pcs.	For item 1. Including 11 collets as below: Ø3,4,5,6,7,8,9,10,11,12,13mm
7	PULL STUD BT-501, BT-502		7pcs.	BT-501 θ =45° BT-502 θ =60°
8	TOOL HOLDER LOCKING STAND VTS-BT-30		1pc.	For locking the pull studs or preparing Cutting tools of tool holders.
9	ELECTRONIC EDGE FINDER VPS-20B		1pc.	For setting work coordinate on Machine Centers.

ORDER NO. VBT-30-1520 CODE NO. 3216-011 BT-30 WITH 15PCS. HOLDER & ER-20 COLLET

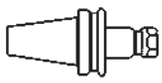
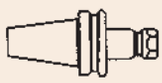
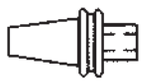
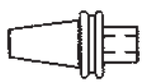
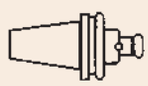
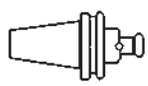
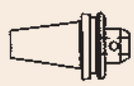
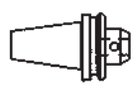
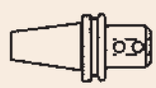
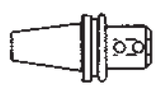
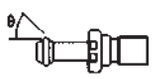
ITEM NO.	Descriptions	Figures	Quantity	Explanation
1	ER20 COLLET CHUCK BT30-ER20-60		6pcs.	For small Dia. End mill and Drills
2	MORSE TAPER ADAPTOR BT30-MTA1-50		1pc.	For drills with Morse taper Shank No.1.
3	MORSE TAPER ADAPTOR BT30-MTA2-60		1pc.	For drills with Morse taper Shank No.2.
4	FACE MILL ARBOR BT30-FMB22-45		1pc.	For Holding the face milling Cutter Dia.50, 63mm
5	END MILL HOLDER BT-30-SL12-60		2pcs.	For straight shank end mill with Sidelock edge Dia. 12mm(WELDON Type)
6	END MILL HOLDER BT30-SL16-60		2pcs.	For straight shank end mill with Sidelock edge Dia. 16mm(WELDON Type)
7	END MILL HOLDER BT30-SL20-75		2pcs.	For straight shank end mill with Sidelock edge Dia. 20mm(WELDON Type)
8	ER20 SPRING COLLET ER20-dØ		11pcs.	For item 1. Including 11 collets as below: Ø3,4,5,6,7,8,9,10,11,12,13mm
9	PULL STUD BT-501, BT-502		15pcs.	BT-501 θ =45° BT-502 θ =60°
10	TOOL HOLDER LOCKING STAND VTS-BT-30		1pc.	For locking the pull studs or preparing Cutting tools of tool holders.
11	ELECTRONIC EDGE FINDER VPS-20B		1pc.	For setting work coordinate on Machine Centers.

Complete NC Tooling Set

We recommend a complete set which is included tool holder, collet chuck, collet set, pull stud, tooling locking stand, edge finder for NC machining center. it is popular and suitable sale-mix in the market.

G.W.:39.6 kgs

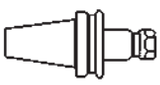
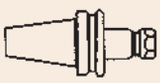
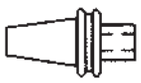
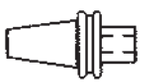
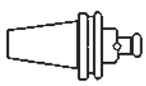
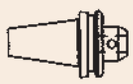
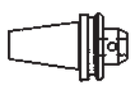
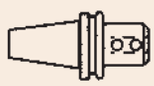
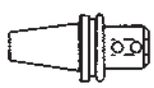
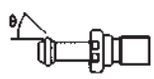
ORDER NO. VBT-40-1532 CODE NO. 3216-002 BT-40 WITH 15PCS. HOLDER & ER-32 COLLET

ITEM NO.	Descriptions	Figures	Quantity	Explanation
1	ER32 COLLET CHUCK BT40-ER32-70		3pcs.	For small Dia. End mill and Drills
2	ER32 COLLET CHUCK BT40-ER32-100		3pcs.	For small Dia. End mill and Drills
3	MORSE TAPER ADAPTOR BT40-MTA1-50		1pc.	For drills with Morse taper Shank No.1.
4	MORSE TAPER ADAPTOR BT40-MTA2-50		1pc.	For drills with Morse taper Shank No.2.
5	MORSE TAPER ADAPTOR BT40-MTA3-75		1pc.	For drills with Morse taper Shank No.3.
6	FACE MILL ARBOR BT40-FMB22-45		1pc.	For holding the face milling Cutter Dia.50, 63mm
7	FACE MILL ARBOR BT40-FMB27-45		1pc.	For holding the face milling Cutter Dia.80mm
8	END MILL HOLDER BT40-SL16-75		1pc.	For straight shank end mill with Sidelock edge Dia. 16mm(WELDON Type)
9	END MILL HOLDER BT40-SL20-90		1pc.	For straight shank end mill with Sidelock edge Dia. 20mm(WELDON Type)
10	END MILL HOLDER BT40-SL25-90		1pc.	For straight shank end mill with Sidelock edge Dia. 25mm(WELDON Type)
11	END MILL HOLDER BT40-SL32-90		1pc.	For straight shank end mill with Sidelock edge Dia. 32mm(WELDON Type)
12	ER32 SPRING COLLET ER32-dØ		11pcs.	For item 1.2. Including 11 collets as below: Ø4,5,6,8,10,12,13,15,16,18,20mm
13	PULL STUD BT-503 OR BT-504		15pcs.	BT-503 θ =45° BT-504 θ =60°
14	TOOL HOLDER LOCKING STAND VTS-BT-40		1pc.	For locking the pull studs or preparing Cutting tools of tool holders.
15	ELECTRONIC EDGE FINDER VPS-20B		1pc.	For setting work coordinate on Machine Centers.

Complete NC Tooling Set

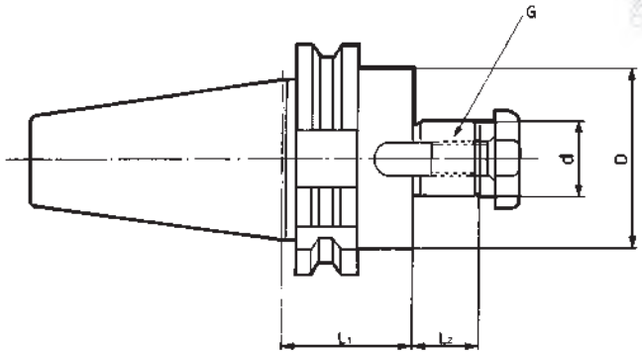
We recommend a complete set which is included tool holder, collet chuck, collet set, pull stud, tooling locking stand, edge finder for NC machining center. it is popular and suitable sale-mix in the market.

ORDER NO. VBT-40-2432 CODE NO. 3216-003 BT-40 WITH 23PCS. HOLDER & ER-32 COLLET

ITEM NO.	Descriptions	Figures	Quantity	Explanation
1	ER32 COLLET CHUCK BT40-ER32-70		4pcs.	For small Dia. End mill and Drills
2	ER32 COLLET CHUCK BT40-ER32-100		4pcs.	For small Dia. End mill and Drills
3	MORSE TAPER ADAPTOR BT40-MTA1-45		1pc.	For drills with Morse taper Shank No.1.
4	MORSE TAPER ADAPTOR BT40-MTA2-45		2pc.	For drills with Morse taper Shank No.2.
5	MORSE TAPER ADAPTOR BT40-MTA3-75		2pc.	For drills with Morse taper Shank No.3.
6	FACE MILL ARBOR BT40-FMB22-45		1pc.	For holding the face milling Cutter Dia.50, 63mm
7	FACE MILL ARBOR BT40-FMB27-45		1pc.	For holding the face milling Cutter Dia.80mm
8	END MILL ARBOR BT40-SL16-75		2pc.	For straight shank end mill with Sidelock edge Dia. 16mm(WELDON Type)
9	END MILL ARBOR BT40-SL20-90		2pc.	For straight shank end mill with Sidelock edge Dia. 20mm(WELDON Type)
10	END MILL ARBOR BT40-SL25-90		2pc.	For straight shank end mill with Sidelock edge Dia. 25mm(WELDON Type)
11	END MILL ARBOR BT40-SL32-90		2pc.	For straight shank end mill with Sidelock edge Dia. 32mm(WELDON Type)
12	ER32 SPRING COLLET ER32-dØ		11pcs.	For item 1.2. Including 11 collets as below: Ø4,5,6,8,10,12,13,15,16,18,20mm
13	PULL STUD BT-503 OR BT-504		23pcs.	BT-503 θ =45° BT-504 θ =60°
14	TOOL HOLDER LOCKING STAND VTS-BT-40		1pc.	For locking the pull studs or preparing Cutting tools of tool holders.
15	ELECTRONIC EDGE FINDER VPS-20B		1pc.	For setting work coordinate on Machine Centers.

Face Mill Holder

Holder For Face Mill Cutter. **DIN 69871A**
DIN69871 A

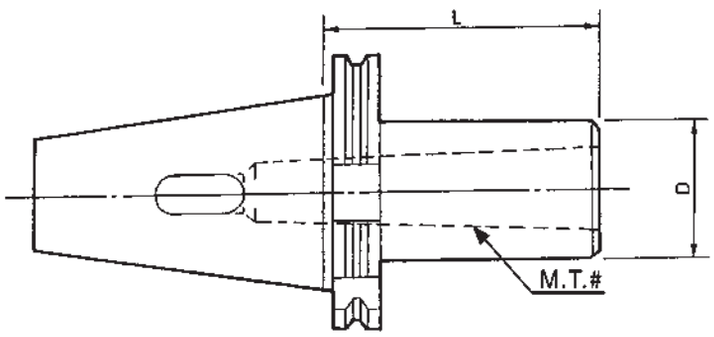


Unit:mm

ORDER NO.	SIZE	d	D	L1	L2	G	WEIIGHT(kg)	CODE NO.
SK-112	SK40-FMB22-50	22	48	50	18	M10	1.5	3211-202
SK-113	SK40-FMB27-50	27	60	50	20	M12	1.6	3211-203
SK-114	SK40-FMB32-50	32	62	50	22	M16	2.1	3211-204
SK-117	SK50-FMB22-50	22	60	50	18	M10	3.5	3211-205
SK-118	SK50-FMB27-50	27	70	50	20	M12	3.5	3211-206
SK-119	SK50-FMB32-60	32	75	60	22	M16	3.7	3211-207
SK-120	SK50-FMB40-60	40	85	60	26	M20	4.7	3211-208

Morse Taper Holder-DIN 6383

Holder For Morse Taper Shank With Tang. **DIN 69871A**
DIN69871 A



Unit:mm

ORDER NO.	SIZE	M.T.#	L	D	WEIIGHT(kg)	CODE NO.
SK-214	SK40-MT1-45	1	45	25	1	3211-133
SK-215	SK40-MT2-50	2	50	32	1	3211-134
SK-216	SK40-MT3-70	3	70	40	1.2	3211-135
SK-217	SK40-MT4-90	4	90	48	1.3	3211-136
SK-218	SK50-MT1-45	1	45	25	3	3211-137
SK-219	SK50-MT2-60	2	60	32	2.9	3211-138
SK-220	SK50-MT3-65	3	65	40	3	3211-139

Sidelock End Mill Holder

DIN69871 A **WELDON TYPE** **DIN 69871A**

Dimensions:

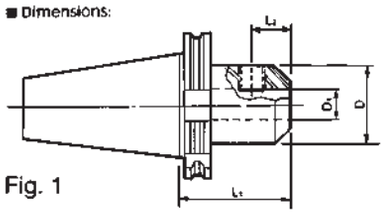


Fig. 1

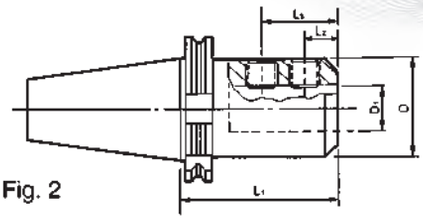


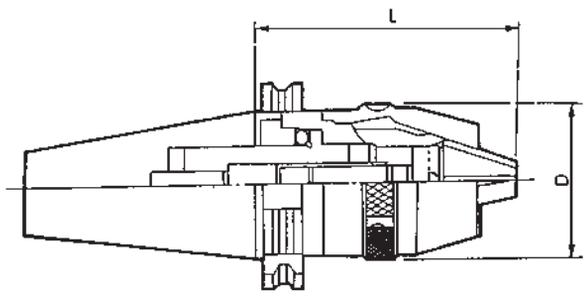
Fig. 2

Unit:mm

ORDER NO.	SIZE	Fig.	D1	D	L1	L2	L3	WEIGHT (kg)	CODE NO.
SK-417	SK40-EM6-50	1	6	25	50	18	-	1	3213-207
SK-418	SK40-EM8-50	1	8	28	50	18	-	1.1	3213-208
SK-419	SK40-EM10-50	1	10	35	50	20	-	1.1	3213-209
SK-420	SK40-EM12-50	1	12	42	50	22.5	-	1.2	3213-210
SK-421	SK40-EM16-63	1	16	48	63	24	-	1.5	3213-211
SK-422	SK40-EM20-63	1	20	52	63	25	-	1.4	3213-212
SK-423	SK40-EM25-100	2	25	65	100	24	49	2.4	3213-213
SK-427	SK50-EM10-63	1	10	35	63	20	-	3.4	3213-217
SK-428	SK50-EM12-63	1	12	42	63	22.5	-	3.4	3213-218
SK-429	SK50-EM16-63	1	16	48	63	24	-	3.5	3213-219
SK-430	SK50-EM20-63	1	20	52	63	25	-	3.5	3213-220
SK-431	SK50-EM25-80	2	25	65	80	24	49	3.8	3213-221

Drill Chuck Holder / APU

DIN 69871A

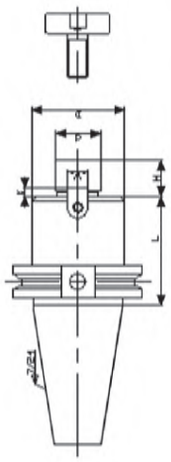


Unit:mm

ORDER NO.	SIZE	Clamping range (Ømm)	D	L		WEIGHT (kg)	CODE NO.
				Minimum	Maximum		
SK-511	SK40-APU08-81	1-8	35.6	81	86.5	1.4	3301-001
SK-512	SK40-APU13-99	1-13	51.5	99	109	1.9	3301-002
SK-513	SK50-APU08-80	1-8	36.3	80	97.5	3.8	3301-003
SK-514	SK50-APU13-94	1-13	51.5	94	120	3.9	3301-004
SK-509	SK30-APU08-70	0.5-8	36	70	77.5	0.7	3301-005
SK-510	SK30-APU13-82	0.5-13	50	82	93.5	1.34	3301-006
SK-515	SK40-APU16-127	3-16	56	127		2.4	3301-007
SK-516	SK50-APU16-98	3-16	56	98		3.9	3301-008

Face Mill Holder

CAT-FMA

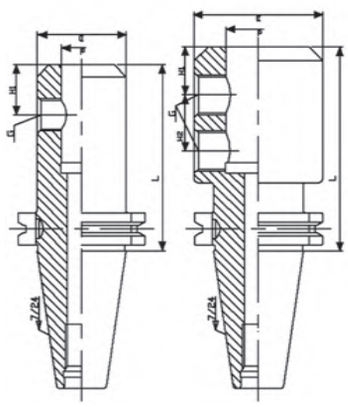


ORDER NO.	L	Ø d(h6)	ØD	H	K	W	CODE NO.
CAT40-FMA25.4-2.0″	2.0″	25.4	50	20	5	9.5	3213-230
CAT40-FMA31.75-2.25″	2.25″	31.75	60	22	7	12.7	3213-231
CAT40-FMA38.1-2.4″	2.4″	38.1	80	25	9	15.9	3213-232
CAT50-FMA25.4-2.0″	2.0″	25.4	50	20	5	9.5	3213-233
CAT50-FMA31.75-1.5″	1.5″	31.75	60	22	7	12.7	3213-234
CAT50-FMA38.1-2.4″	2.4″	38.1	80	25	9	15.9	3213-235
CAT50-FMA50.8-2.4″	2.4″	50.8	100	28	12	15.9	3213-236

Side Lock Holders

CAT-SL

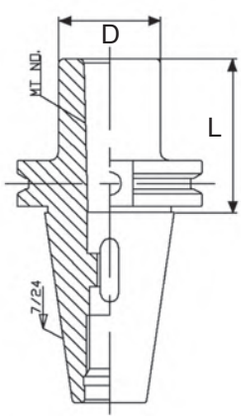
FIG 1 FIG 2



ORDER NO.	FIG	L	Ød	ØD	H1	H2	G	CODE NO.
CAT40-SL08-2.50″	1	2.5″	8	28	18	-	M8	3213-240
CAT40-SL10-2.50″			10	35	20		M10	3213-241
CAT40-SL12-2.62″		2.62″	12	42	22.5		M12	3213-242
CAT40-SL16-2.75″		2.75″	16	48	24		M14	3213-243
CAT40-SL20-3.50″		3.5″	20	48	25		M16	3213-244
CAT40-SL25-4.00″	2	4.0″	25	62	24	25	M18	3213-245
CAT40-SL32-4.00″			32	72		28	M20	3213-246
CAT50-SL08-2.50″	1	2.5″	8	28	18	-	M8	3213-247
CAT50-SL10-2.50″			10	35	20		M10	3213-248
CAT50-SL12-2.62″		2.62″	12	42	22.5		M12	3213-249
CAT50-SL16-2.75″		2.75″	16	48	24		M14	3213-250
CAT50-SL20-3.50″		3.5″	20	52	25		M16	3213-251
CAT50-SL25-4.00″	2	4.0″	25	65	24	25	M18	3213-252
CAT50-SL32-4.00″			32	72		28	M20	3213-253
CAT50-SL40-4.70″		4.7″	40	90	30	32		3213-254

Mose Taper Holders

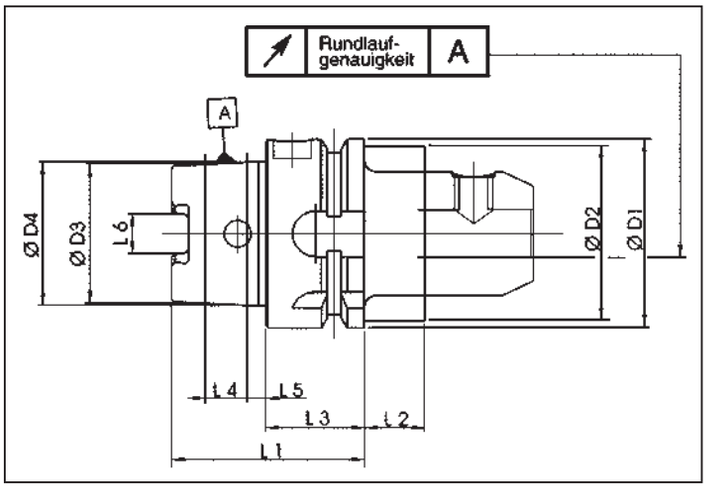
CAT-MTA



ORDER NO.	MT NO.	L	ØD	CODE NO.
CAT30-MTA2-60	2	60	32	3213-260
CAT30-MTA3-80	3	80	40	3213-261
CAT40-MTA2-60	2	60	32	3213-262
CAT40-MTA3-75	3	75	40	3213-263
CAT40-MTA4-90	4	90	50	3213-264
CAT50-MTA2-45	2	45	32	3213-265
CAT50-MTA3-45	3	45	40	3213-266
CAT50-MTA4-75	4	75	50	3213-267
CAT50-MTA5-105	5	105	65	3213-268

HSK-A63(DIN-69893) Tool Holder

Form A



Compared to the steep taper the HSK has the following advantages

- High repetition accuracy when clamping tools into spindle
- Fix axial positioning by flat contact surface
- Suitable for high speed cutting
- No pull stud necessary

Material

- Special Cast-hardening steel for highly stressed parts
- Surface hardness 58-2 HRC

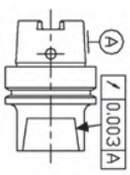
Tensile strength in core min. 1000 N / mm²

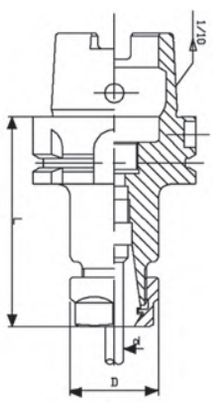
DIN 69893

SIZE	ØD1	ØD2	ØD3	ØD4	L1	L2	L3	L4	L5	L6
HSK 63	63	53	46.53	48	58	16	26	14.7	6.3	12.54

HSK-A63(DIN69893A) ER Collet Chucks

DIN69893 A





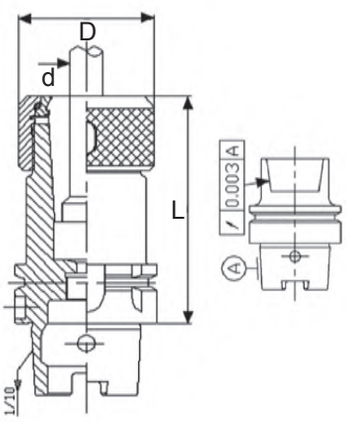
10000 R.P.M. G6.3

Caution:Excessive torque will damage the chuck, nut or collet.

ORDER NO.	L	ØD	ØD RANG	WEIGHT (kgs)	CODE NO.
HSK-A63-ER16-100	100	30	0.5-10	1.07	3217-100
HSK-A63-ER16-150	150			1.33	3217-101
HSK-A63-ER20-100	100	35	1.0-13	1.07	3217-102
HSK-A63-ER20-150	150			1.47	3217-103
HSK-A63-ER25-100	100	42	1.0-16	1.29	3217-104
HSK-A63-ER25-150	150			1.80	3217-105
HSK-A63-ER32-100	100	50	2.0-20	1.48	3217-106
HSK-A63-ER32-150	150			2.16	3217-107
HSK-A63-ER40-100	100	63	3.0-26	1.56	3217-108
HSK-A63-ER40-150	150			2.27	3217-109
HSK-A100-ER16-100	100	30	0.5-10		3217-110
HSK-A100-ER16-150	150				3217-111
HSK-A100-ER20-100	100	35	1.0-13		3217-112
HSK-A100-ER20-150	150				3217-113
HSK-A100-ER25-100	100	42	1.0-16	2.64	3217-114
HSK-A100-ER25-150	150			3.2	3217-115
HSK-A100-ER32-100	100	50	2.0-20	2.8	3217-116
HSK-A100-ER32-150	150			3.67	3217-117
HSK-A100-ER40-100	100	63	3.0-26		3217-118
HSK-A100-ER40-150	150				3217-119

HSK-A63(DIN69893A) OZ Collet Chucks

DIN69893 A

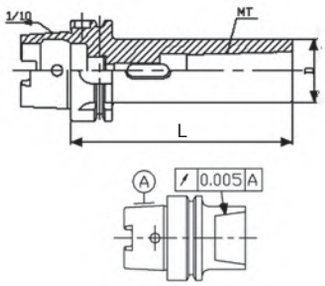


10000 R.P.M. G6.3

ORDER NO.	L	ØD	ØD RANG	CODE NO.
HSK-A63-OZ25-100	100	60	2-25	3217-121
HSK-A63-OZ32-120	120	78	4-32	3217-122
HSK-A100-OZ25-100	100	60	2-25	3217-123
HSK-A100-OZ32-120	120	78	4-32	3217-124

HSK-A63 Morse Taper Holders

DIN69892 A **DIN 69892A**

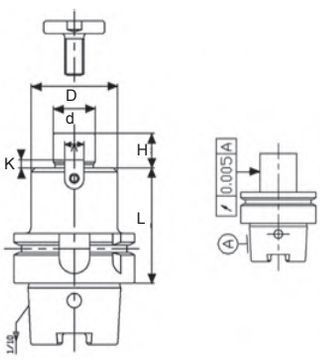


10000 R.P.M. G6.3

ORDER NO.	MT NO.	L	ØD	kgs	CODE NO.
HSK-A63-MTA1-100	1	100	25	1	3217-130
HSK-A63-MTA2-120	2	120	35	1.3	3217-131
HSK-A63-MTA3-140	3	140	40	1.6	3217-132
HSK-A63-MTA4-160	4	160	50	2.2	3217-133
HSK-A100-MTA1-110	1	100	25		3217-134
HSK-A100-MTA2-120	2	120	35		3217-135
HSK-A100-MTA3-150	3	140	40		3217-136
HSK-A100-MTA4-170	4	160	50		3217-137
HSK-A100-MTA5-200	5	200	65		3217-138

HSK-A63 Face Mill Holders

DIN69893 A **DIN 69893A**

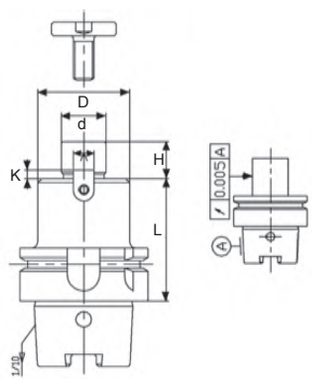


10000 R.P.M. G6.3

ORDER NO.	L	Ø d(h6)	ØD	H	K	W	CODE NO.
HSK-A63-FMA25.4-60	60	25.4	50	20	5	9.5	3217-140
HSK-A63-FMA25.4-120	120						3217.141
HSK-A63-FMA31.75-60	60	31.75	60	22	7	12.7	3217-142
HSK-A63-FMA31.75-120	120						3217-143
HSK-A63-FMA38.1-60	60	38.1	80	25	9	15.9	3217-144
HSK-A63-FMA38.1-120	120						3217-145
HSK-A100-FMA25.4-60	60	25.4	50	20	5	9.5	3217-146
HSK-A100-FMA25.4-120	120						3217-147
HSK-A100-FMA31.75-60	60	31.75	60	22	7	12.7	3217-148
HSK-A100-FMA31.75-120	120						3217-149
HSK-A100-FMA38.1-60	60	38.1	80	25	9	15.9	3217-150
HSK-A100-FMA38.1-120	120						3217-151
HSK-A100-FMA50.8-60	60	50.8	100	28	12		3217-152
HSK-A100-FMA50.8-120	120						3217-153

HSK-A63 Face Mill Holders

DIN69893 A0 **DIN 69893A**



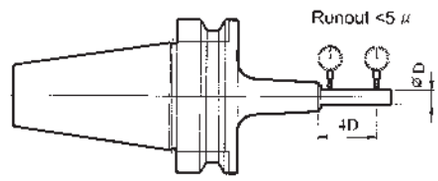
10000 R.P.M. G6.3

ORDER NO.	L	Ø d(h6)	ØD	H	K	W	CODE NO.
HSK-A63-FMB22-50	50	22	48	18	5	10	3217-156
HSK-A63-FMB22-120	120						3217-157
HSK-A63-FMB27-60	60	27	60	20	6	12	3217-158
HSK-A63-FMB27-120	120						3217-159
HSK-A63-FMB32-60	60	32	72	22	7	14	3217-160
HSK-A63-FMB32-120	120						3217-161
HSK-A63-FMB40-60	60	40	80	25	8	16	3217-162
HSK-A63-FMB40-120	120						3217-163
HSK-A100-FMB22-50	50	22	48	18	5	10	3217-164
HSK-A100-FMB22-120	120						3217-165
HSK-A100-FMB27-60	60	27	60	20	6	12	3217-166
HSK-A100-FMB27-120	120						3217-167
HSK-A100-FMB32-60	60	32	72	22	7	14	3217-168
HSK-A100-FMB32-120	120						3217-169
HSK-A100-FMB40-60	60	40	80	25	8	16	3217-170
HSK-A100-FMB40-120	120						3217-171

DC High Speed Slim Chuck System

5 μ
30.000
rpm

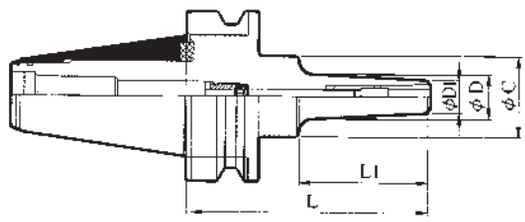
- Smallest outer diameter in the world: ø12; this can solve the difficulties during thin processing on mold manufacture.
- Collets with different sizes can be used on all kind of end mills, reamers,drills and tapping below 6m/m.
- High speed balancing :30,000rpm; G2.5
- Runout: <5 μm(Length 4D)



Slim Collet Chuck With Double Face Contact

DC Collet System

5 μ
30.000
rpm

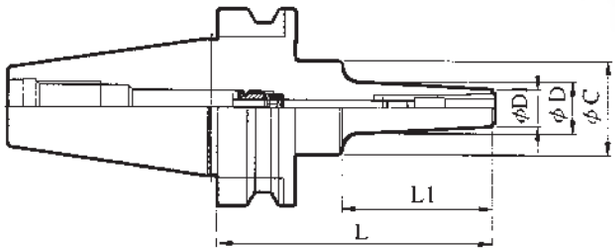


- For the features of double face contact.
- Runout: below 0.005mm.(length 4D)
- Smallest outer diameter in the world: ø12(Collet inside diameter ø1.75～ø6)
- Max speed: 30,000rpm;G2.5.

ORDER NO.	Spindle	L	L1	D	D1	C	WEIGHT (kg)	CODE NO.
BTD30-DC6-60	BT30	60	38	16	12	-	0.5	3218-040
BTD30-DC6-90	BT30	90	50	17	12	30	0.7	3218-041
BTD40-DC6-60	BT40	60	33	16	12	-	1.1	3218-042
BTD40-DC6-90	BT40	90	48	17	12	30	1.2	3218-043

MAS BT30/40 Collet Chuck

DC Collet System



- Runout: below 0.005mm.(length 4D)
- Smallest outer diameter in the world :ø12(Collet inside diameter ø1.75～ø6)
- Max speed :30.000rpm;G2.5.

ORDER NO.	L	L1	D	D1	C	WEIGHT(kg)	CODE NO.
BT30-DC6-60	60	38	16	12	-	0.5	3218-044
BT30-DC6-90	90	50	17	12	30	0.7	3218-045
BT40-DC6-60	60	33	16	12	-	1.1	3218-046
BT40-DC6-90	90	48	17	12	30	1.2	3218-047

Cylindrical Shank Of DC Slim Chuck

DC Collet System

Fig. 1

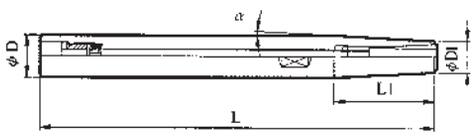


Fig. 2

- Runout: below 0.005mm.(length 4D)
- Smallest outer diameter in the world :ø12(Collet inside diameter ø1.75～ø6)
- Using anti-vibration material, surface hardness HRC 65°

ORDER NO.	Fig	L	L1	D	D1	α	WEIGHT(kg)	CODE NO.
ST12-DC6-120	1	120	-	12	12	-	0.4	3218-048
ST16-DC6-150	2	150	38	16	12	3°	0.4	3218-049
ST20-DC6-200	2	200	76	20	12	3°	0.6	3218-050
ST25-DC6-250	2	250	124	25	12	3°	0.9	3218-051

Set Of DC Collets And Collet Chuck

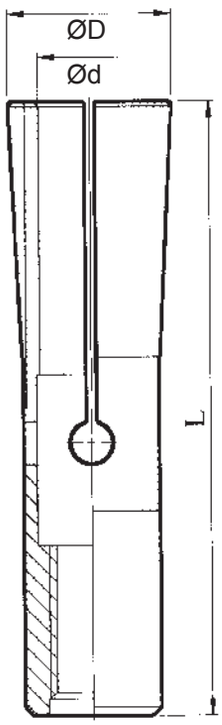
DC Collet System

ORDER NO.	Cellet Chuck	Collets	Spanner	WEIGHT(kg)	CODE NO.
SST12-DC6-120E	ST12-DC6-120	EACH SET	30109-205	0.7	3218-052
SST16-DC6-150E	ST16-DC6-150	DC6-3E X 1pc	30109-205	0.7	3218-053
SST20-DC6-200E	ST20-DC6-200	DC6-4E X 1pc	30109-205	1.1	3218-054
SST25-DC6-250E	ST25-DC6-250	DC6-6E X 1pc	30109-205	1.5	3218-055

Small Collet Of Slim Collet Chuck

DC Collet System

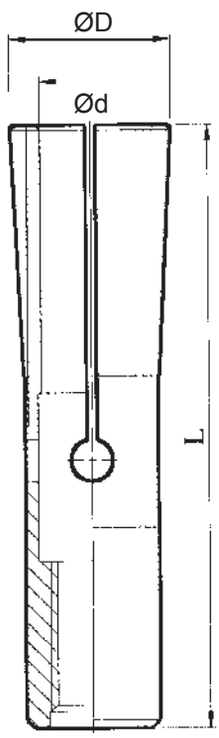
- Below ø6 can clamp any shank.
- DC6 series : for clamping drills, reamers and taps.
- DC6-E series:for clamping end mills.
- Runout : below 0.005mm. (length 4D)



ORDER NO.	ØD	L	Range(d)	WEIGHT(kg)	CODE NO.
DC6-2	9.8	36	1.75-2.00	0.02	3218-056
DC6-2.25	9.8	36	2.00-2.25	0.02	3218-057
DC6-2.5	9.8	36	2.25-2.50	0.02	3218-058
DC6-2.75	9.8	36	2.50-2.75	0.02	3218-059
DC6-3	9.8	36	2.75-3.00	0.02	3218-065
DC6-3.25	9.8	36	3.00-3.25	0.02	3218-066
DC6-3.5	9.8	36	3.25-3.50	0.02	3218-067
DC6-3.75	9.8	36	3.50-3.75	0.02	3218-068
DC6-4	9.8	36	3.75-4.00	0.02	3218-069
DC6-4.25	9.8	36	4.00-4.25	0.02	3218-070
DC6-4.5	9.8	36	4.25-4.50	0.02	3218-071
DC6-4.75	9.8	36	4.50-4.75	0.02	3218-072
DC6-5	9.8	36	4.75-5.00	0.02	3218-073
DC6-5.25	9.8	36	5.00-5.25	0.02	3218-074
DC6-5.5	9.8	36	5.25-5.50	0.02	3218-075
DC6-5.75	9.8	36	5.50-5.75	0.02	3218-076
DC6-6	9.8	36	5.75-6.00	0.02	3218-077

Collet For End Mill Shank

DC Collet System



ORDER NO.	Ød	ØD	L	WEIGHT(kg)	CODE NO.
DC6-3E	3	9.6	36	0.02	3218-078
DC6-4E	4	9.6	36	0.02	3218-079
DC6-6E	6	9.6	36	0.02	3218-081

High Speed Chuck

UC COLLET CHUCK

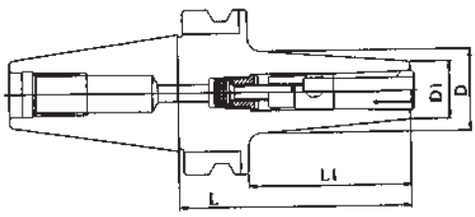
For clamping HSC(High speed cutting) tools on machining centers.
Maximum speed:15,000 R.P.M.
High accuracy:0.005mm T.I.R

Features

Taper of UC spring collet is 1/120, self-locked function mades high gripping power to prevent slip-out of the cutting tools.
UC spring collet chucks are made by high alloy steel and cast hardened up to HRC59° and ground to ultra precision.
UC spring collets are slit with a patented slotted-design for increasing gripping power and accuracy. (PAT.103654)

NEW

UC

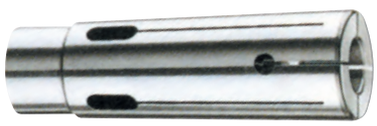


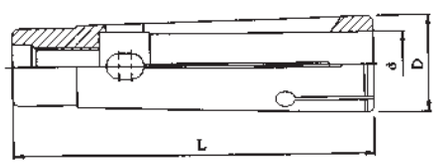
ORDER NO.	L	L1	D	D1	Collets	WEIGHT (kgs)	CODE NO.
BT30-UC10-70	70	48	30	22	UC10	0.7	3218-001
BT40-UC10-90	90	63	32	22	UC10	1.4	3218-002
BT40-UC16-90	90	63	40	30	UC16	1.5	3218-003
BT50-UC10-110	110	72	36	22	UC10	4.1	3218-004
BT50-UC16-120	120	82	42	30	UC16	4.5	3218-005

STRAIGHT SHANK UC CHUCK

ORDER NO.	L	L1	D	D1	Collets	WEIGHT (kg)	CODE NO.
C25-UC10-150	150	50	25	22	UC10	0.6	3218-030
C25-UC10-200	200	50	25	22	UC10	0.8	3218-031

UC SPRING COLLETS

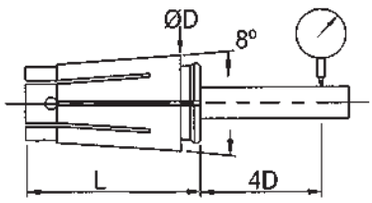




ORDER NO.	d	D	L	WEIGHT(kg)	CODE NO.
UC10-6	6	15	56.5	0.06	3218-060
UC10-8	8			0.05	3218-061
UC10-10	10			0.04	3218-062
UC16-10	10	21	67	0.12	3218-090
UC16-12	12			0.11	3218-091
UC16-14	14			0.09	3218-092
UC16-16	16			0.07	3218-093

SK Spring Collet System

JIS STD. **15000 R.P.M.**



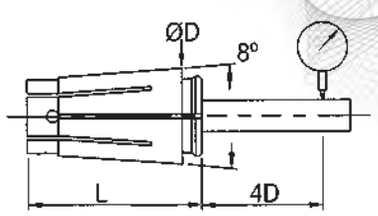
TYPE	D	L
SK6	10.5	25
SK10	15.5	30.5
SK16	24.5	45
SK20	29.5	50
SK25	35.5	57

THE GRIPPING RANGE OF DIA. BELOW 3MM IS 0.25MM
THE GRIPPING RANGE OF DIA. OVER 3MM IS 0.5MM
THE RUNOUT OF A COLLET IS 10μ.

TYPE	SK-6				SK-10				SK-16				SK-20				SK-25			
	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.
INDIVIDUAL UNIT	SK0601A	2	2-1.75	3218-400	SK1001A	2	2-1.75	3218-411	SK1601A	3	3-2.75	3218-430	SK2001A	3	3-2.75	3218-460	SK2501A	6	6-5.5	3218-470
	SK0602A	2.5	2.5-2.25	3218-401	SK1002A	2.5	2.5-2.25	3218-412	SK1602A	3.175	3.175-2.7	3218-431	SK2002A	4	4-3.5	3218-461	SK2502A	8	8-7.5	3218-471
	SK0603A	3	3-2.75	3218-402	SK1003A	3	3-2.75	3218-413	SK1603A	3.5	3.5-3	3218-432	SK2003A	6	6-5.5	3218-462	SK2503A	10	10-9.5	3218-472
	SK0604A	3.5	3.5-3	3218-403	SK1004A	3.175	3.175-2.7	3218-414	SK1604A	4	4-3.5	3218-433	SK2004A	8	8-7.5	3218-463	SK2504A	12	12-11.5	3218-473
	SK0605A	4	4-3.5	3218-404	SK1005A	3.5	3.5-3	3218-415	SK1605A	4.5	4.5-4	3218-434	SK2005A	10	10-9.5	3218-464	SK2505A	14	14-13.5	3218-474
	SK0606A	4.5	4.5-4	3218-405	SK1006A	4	4-3.5	3218-416	SK1606A	5	5-4.5	3218-435	SK2006A	12	12-11.5	3218-465	SK2506A	16	16-15.5	3218-475
	SK0607A	5	5-4.5	3218-406	SK1007A	4.5	4.5-4	3218-417	SK1607A	5.5	5.5-5	3218-436	SK2007A	16	16-15.5	3218-466	SK2507A	18	18-17.5	3218-476
	SK0608A	5.5	5.5-5	3218-407	SK1008A	5	5-4.5	3218-418	SK1608A	6	6-5.5	3218-437	SK2008A	20	20-19.5	3218-467	SK2508A	20	20-19.5	3218-477
	SK0609A	6	6-5.5	3218-408	SK1009A	5.5	5.5-5	3218-419	SK1609A	6.5	6.5-6	3218-438					SK2509A	22	22-21.5	3218-478
					SK1010A	6	6-5.5	3218-420	SK1610A	7	7-6.5	3218-439					SK2510A	24	24-23.5	3218-479
					SK1011A	6.5	6.5-6	3218-421	SK1611A	7.5	7.5-7	3218-440					SK2511A	25	25-24.5	3218-480
					SK1012A	7	7-6.5	3218-422	SK1612A	8	8-7.5	3218-441					SK2512A	25.4	25.4-25	3218-481
					SK1013A	7.5	7.5-7	3218-423	SK1613A	8.5	8.5-8	3218-442								
					SK1014A	8	8-7.5	3218-424	SK1614A	9	9-8.5	3218-443								
					SK1015A	8.5	8.5-8	3218-425	SK1615A	9.5	9.5-9	3218-444								
					SK1016A	9	9-8.5	3218-426	SK1616A	10	10-9.5	3218-445								
					SK1017A	9.5	9.5-9	3218-427	SK1617A	10.5	10.5-10	3218-446								
					SK1018A	10	10-9.5	3218-428	SK1618A	11	11-10.5	3218-447								
									SK1619A	11.5	11.5-11	3218-448								
									SK1620A	12	12-11.5	3218-449								
									SK1621A	12.5	12.5-12	3218-450								
									SK1622A	13	13-12.5	3218-451								
									SK1623A	13.5	13.5-13	3218-452								
									SK1624A	14	14-13.5	3218-453								
									SK1625A	14.5	14.5-14	3218-454								
									SK1626A	15	15-14.5	3218-455								
									SK1627A	15.5	15.5-15	3218-456								
									SK1628A	16	16-15.5	3218-457								

SK Spring Collet System

JIS STD. **15000 R.P.M.**



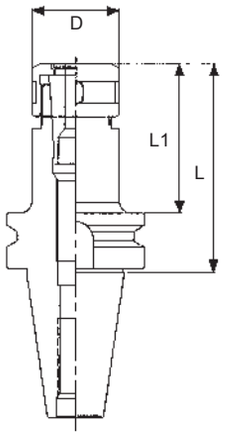
THE GRIPPING RANGE OF DIA. BELOW 3MM IS 0.25MM
THE GRIPPING RANGE OF DIA. OVER 3MM IS 0.5MM
THE RUNOUT OF AA COLLET IS 5μ.

TYPE	SK-6				SK-10				SK-16				SK-20				SK-25			
	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.	ORDER NO.	ØD	CAP. mm Ø	CODE NO.
INDIVIDUAL UNIT	SK0601AA	2	2-1.75	3218-500	SK1001AA	2	2-1.75	3218-511	SK1601AA	3	3-2.75	3218-530	SK2001AA	3	3-2.75	3218-560	SK2501AA	6	6-5.5	3218-570
	SK0602AA	2.5	2.5-2.25	3218-501	SK1002AA	2.5	2.5-2.25	3218-512	SK1602AA	3.175	3.175-2.7	3218-531	SK2002AA	4	4-3.5	3218-561	SK2502AA	8	8-7.5	3218-571
	SK0603AA	3	3-2.75	3218-502	SK1003AA	3	3-2.75	3218-513	SK1603AA	3.5	3.5-3	3218-532	SK2003AA	6	6-5.5	3218-562	SK2503AA	10	10-9.5	3218-572
	SK0604AA	3.5	3.5-3	3218-503	SK1004AA	3.175	3.175-2.7	3218-514	SK1604AA	4	4-3.5	3218-533	SK2004AA	8	8-7.5	3218-563	SK2504AA	12	12-11.5	3218-573
	SK0605AA	4	4-3.5	3218-504	SK1005AA	3.5	3.5-3	3218-515	SK1605AA	4.5	4.5-4	3218-534	SK2005AA	10	10-9.5	3218-564	SK2505AA	14	14-13.5	3218-574
	SK0606AA	4.5	4.5-4	3218-505	SK1006AA	4	4-3.5	3218-516	SK1606AA	5	5-4.5	3218-535	SK2006AA	12	12-11.5	3218-565	SK2506AA	16	16-15.5	3218-575
	SK0607AA	5	5-4.5	3218-506	SK1007AA	4.5	4.5-4	3218-517	SK1607AA	5.5	5.5-5	3218-536	SK2007AA	16	16-15.5	3218-566	SK2507AA	18	18-17.5	3218-576
	SK0608AA	5.5	5.5-5	3218-507	SK1008AA	5	5-4.5	3218-518	SK1608AA	6	6-5.5	3218-537	SK2008AA	20	20-19.5	3218-567	SK2508AA	20	20-19.5	3218-577
	SK0609AA	6	6-5.5	3218-508	SK1009AA	5.5	5.5-5	3218-519	SK1609AA	6.5	6.5-6	3218-538					SK2509AA	22	22-21.5	3218-578
					SK1010AA	6	6-5.5	3218-520	SK1610AA	7	7-6.5	3218-539					SK2510AA	24	24-23.5	3218-579
					SK1011AA	6.5	6.5-6	3218-521	SK1611AA	7.5	7.5-7	3218-540					SK2511AA	25	25-24.5	3218-580
					SK1012AA	7	7-6.5	3218-522	SK1612AA	8	8-7.5	3218-541					SK2512AA	25.4	25.4-25	3218-581
					SK1013AA	7.5	7.5-7	3218-523	SK1613AA	8.5	8.5-8	3218-542								
					SK1014AA	8	8-7.5	3218-524	SK1614AA	9	9-8.5	3218-543								
					SK1015AA	8.5	8.5-8	3218-525	SK1615AA	9.5	9.5-9	3218-544								
					SK1016AA	9	9-8.5	3218-526	SK1616AA	10	10-9.5	3218-545								
					SK1017AA	9.5	9.5-9	3218-527	SK1617AA	10.5	10.5-10	3218-546								
					SK1018AA	10	10-9.5	3218-528	SK1618AA	11	11-10.5	3218-547								
									SK1619AA	11.5	11.5-11	3218-548								
									SK1620AA	12	12-11.5	3218-549								
									SK1621AA	12.5	12.5-12	3218-550								
									SK1622AA	13	13-12.5	3218-551								
									SK1623AA	13.5	13.5-13	3218-552								
									SK1624AA	14	14-13.5	3218-553								
									SK1625AA	14.5	14.5-14	3218-554								
									SK1626AA	15	15-14.5	3218-555								
									SK1627AA	15.5	15.5-15	3218-556								
									SK1628AA	16	16-15.5	3218-557								

BT-SK Collet Chuck System

VERTEX®

AA **JIS STD.**



- THE SK CHUCK IS ACCORDING TO THE DESIGN OF ANGEL 8 WITH HIGH ACCURACY AND HIGH GRIPPING RANGE. THE GRIPPING TORQUE IS HIGHER THAN STANDARD ER CHUCK.
- THE DYNAMIC BALANCE OF SK CHUCK CAN BE REACHED 15000RPM X 2.5G.

ORDER NO.	BT TYPE	COLLET TYPE	COLLET SIZE	D	L	L1	WEIGHT (kgs)	CODE NO.
SKB-201	BT-30-SK6-60	SK6	2-6	20	60	38	0.5	3218-600
SKB-202	BT-30-SK6-90	SK6	2-6	20	90	68	0.55	3218-601
SKB-203	BT-30-SK10-60	SK10	2-10	28	60	38	0.5	3218-602
SKB-204	BT-30-SK10-90	SK10	2-10	28	90	68	0.7	3218-603
SKB-205	BT-30-SK16-60	SK16	3-16	40	60	38	0.6	3218-604
SKB-206	BT-30-SK16-90	SK16	3-16	40	90	68	0.7	3218-605
SKB-207	BT-40-SK6-60	SK6	2-6	20	60	33	0.9	3218-606
SKB-208	BT-40-SK6-90	SK6	2-6	20	90	63	1	3218-607
SKB-209	BT-40-SK6-120	SK6	2-6	20	120	93	1.2	3218-608
SKB-210	BT-40-SK10-60	SK10	2-10	28	60	33	1	3218-609
SKB-211	BT-40-SK10-90	SK10	2-10	28	90	63	1.1	3218-610
SKB-212	BT-40-SK10-120	SK10	2-10	28	120	93	1.2	3218-611
SKB-213	BT-40-SK10-150	SK10	2-10	28	150	123	1.3	3218-612
SKB-214	BT-40-SK16-60	SK16	3-16	40	60	33	1.2	3218-613
SKB-215	BT-40-SK16-90	SK16	3-16	40	90	63	1.3	3218-614
SKB-216	BT-40-SK16-120	SK16	3-16	40	120	93	1.4	3218-615
SKB-217	BT-40-SK16-150	SK16	3-16	40	150	123	1.5	3218-616
SKB-218	BT-40-SK20-60	SK20	3-20	50	60	33	1.2	3218-617
SKB-219	BT-40-SK20-90	SK20	3-20	50	90	63	1.3	3218-618
SKB-220	BT-40-SK20-120	SK20	3-20	50	120	93	1.4	3218-619
SKB-221	BT-40-SK20-150	SK20	3-20	50	150	123	1.5	3218-620
SKB-222	BT-40-SK25-80	SK25	6-25	55	80	53	1.5	3218-621
SKB-223	BT-40-SK25-100	SK25	6-25	55	100	73	1.65	3218-622
SKB-224	BT-50-SK6-100	SK6	2-6	20	100	62	3.6	3218-623
SKB-225	BT-50-SK6-150	SK6	2-6	20	150	112	4	3218-624
SKB-226	BT-50-SK10-100	SK10	2-10	28	100	62	3.6	3218-625
SKB-227	BT-50-SK10-150	SK10	2-10	28	150	112	4	3218-626
SKB-228	BT-50-SK16-100	SK16	3-16	40	100	62	4	3218-627
SKB-229	BT-50-SK16-150	SK16	3-16	40	150	112	4.5	3218-628
SKB-230	BT-50-SK20-100	SK20	3-20	50	100	62	4.3	3218-629
SKB-231	BT-50-SK20-150	SK20	3-20	50	150	112	5.3	3218-630
SKB-232	BT-50-SK25-100	SK25	6-25	55	100	62	4.5	3218-631
SKB-233	BT-50-SK25-150	SK25	6-25	55	150	112	5.5	3218-632

Set Of SK Collet And MAS BT Chuck

AA **JIS STD.** **15000 R.P.M.**

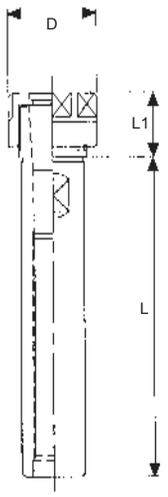
SK COLLET SET

METRIC RANGE SET SIZE
SK06/5pcs : Ø2, 3, 4, 5, 6
SK10/8pcs : Ø3, 4, 5, 6, 7, 8, 9, 10
SK16/8pcs : Ø3, 4, 6, 8, 10, 12, 14, 16
SK20/8pcs : Ø4, 6, 8, 10, 12, 14, 16, 20
SK25/7pcs : Ø6, 8, 10, 12, 16, 20, 25

ORDER NO.	BT TYPE	COLLET TYPE	SET RANGE	COLLET PCS	WEIGHT (kg)	CODE NO.
SKB-301	BT-30-SK6-60L	SK6	2-6	5	1.3	3218-640
SKB-302	BT-30-SK6-90L	SK6	2-6	5	1.45	3218-641
SKB-303	BT-30-SK10-60L	SK10	3-10	8	1.7	3218-642
SKB-304	BT-30-SK10-90L	SK10	3-10	8	1.9	3218-643
SKB-305	BT-30-SK16-60L	SK16	3-16	8	2.5	3218-644
SKB-306	BT-30-SK16-90L	SK16	3-16	8	2.8	3218-645
SKB-307	BT-40-SK6-60L	SK6	2-6	5	2.1	3218-646
SKB-308	BT-40-SK6-90L	SK6	2-6	5	2.3	3218-647
SKB-309	BT-40-SK10-60L	SK10	3-10	8	2.6	3218-648
SKB-310	BT-40-SK10-90L	SK10	3-10	8	2.8	3218-649
SKB-311	BT-40-SK16-60L	SK16	3-16	8	3	3218-650
SKB-312	BT-40-SK16-90L	SK16	3-16	8	3.3	3218-651
SKB-313	BT-40-SK20-60L	SK20	4-20	8	3.8	3218-652
SKB-314	BT-40-SK20-90L	SK20	4-20	8	4.1	3218-653
SKB-315	BT-40-SK25-80L	SK25	6-25	7	4.5	3218-654

ST-SK Straight Chuck

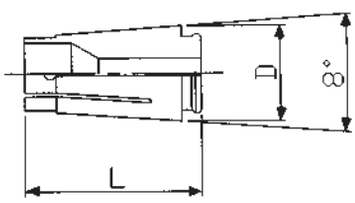
JIS STD. 15000 R.P.M.



ORDER NO.	TYPE	COLLET	D	L	L1	WEIGHT(kg)	CODE NO.
SKS-210	ST-20-SK6-100	SK6	20	100	20	0.25	3218-660
SKS-211	ST-20-SK6-150	SK6	20	150	20	0.3	3218-661
SKS-212	ST-20-SK10-100	SK10	28	100	20	0.3	3218-662
SKS-213	ST-20-SK10-150	SK10	28	150	20	0.45	3218-663
SKS-214	ST-20-SK10-200	SK10	28	200	20	0.55	3218-664

Set Of SK Collet And Straight Chuck

JIS STD. 15000 R.P.M.

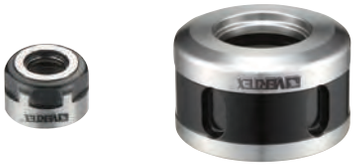


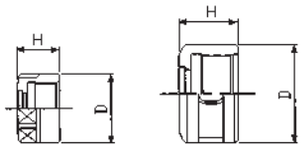
SK COLLET SET

METRIC RANGE SET SIZE
SK06/5pcs : Ø2, 3, 4, 5, 6
SK10/8pcs : Ø3, 4, 5, 6, 7, 8, 9, 10

ORDER NO.	ST TYPE	COLLET	SET RANGE	COLLET SET	WEIGHT (kg)	CODE NO.
SKS-231	ST-20-SK6-100	SK6	2-6	5	0.7	3218-670
SKS-232	ST-20-SK6-150	SK6	2-6	5	0.8	3218-671
SKS-233	ST-20-SK10-100	SK10	3-10	8	1.1	3218-672
SKS-234	ST-20-SK10-150	SK10	3-10	8	1.3	3218-673

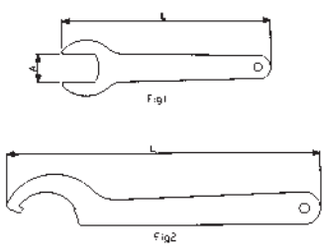
SK Nut And Wrench





SK NUT

ORDER NO.	FIG	COLLET TYPE	D	H	WEIGHT (kg)	CODE NO.
SKN-601	1	SK06	19.5	15	0.05	3218-680
SKN-101	1	SK10	28	17	0.05	3218-681
SKN-161	2	SK16	40	24	0.08	3218-682
SKN-201	2	SK20	50	25	0.1	3218-683
SKN-251	2	SK25	55	30	0.12	3218-684



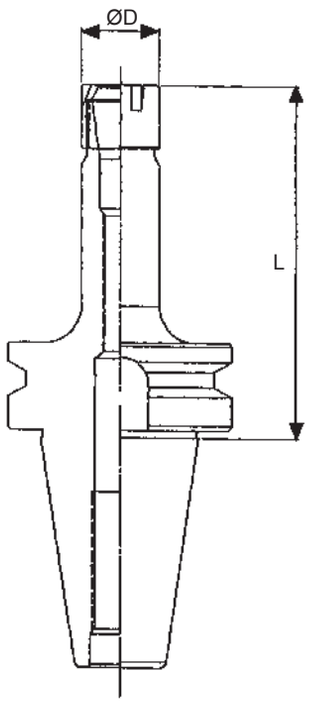
SK WRENCH

ORDER NO.	FIG	COLLET TYPE	D	H	WEIGHT (kg)	CODE NO.
SKW-601	1	SK06	18	130	0.08	3218-690
SKW-101	1	SK10	25	140	0.08	3218-691
SKW-161	2	SK16	X	195	0.2	3218-692
SKW-201	2	SK20	X	228	0.22	3218-693
SKW-251	2	SK25	X	228	0.22	3218-694

ER Collet Chuck System

MAS403 BT30/40/50 SHANK

ULTRA PRECISION TYPE
MAX. SPEED: 15,000RPM; G2.5
DYNAMIC BALANCE TESTED



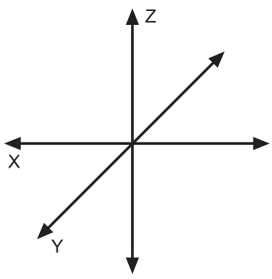
ORDER NO.	L	ØD	COLLET	WEIGHT (kg)	CODE NO.
BT30-ER11-60-B	60	19	ER11	0.5	3033-500
BT30-ER11-100-B	100	19	ER11	0.55	3033-501
BT30-ER16-60-B	60	28	ER16	0.5	3033-502
BT30-ER16-100-B	100	28	ER16	0.7	3033-503
BT30-ER20-60-B	60	34	ER20	0.55	3033-504
BT30-ER20-100-B	100	34	ER20	0.8	3033-505
BT30-ER25-60-B	60	42	ER25	0.6	3033-506
BT30-ER32-60-B	60	50	ER32	0.65	3033-507
BT40-ER11-70-B	70	19	ER11	1	3033-509
BT40-ER11-100-B	100	19	ER11	1.1	3033-510
BT40-ER16-70-B	70	28	ER16	1.1	3033-511
BT40-ER16-100-B	100	28	ER16	1.2	3033-512
BT40-ER20-70-B	70	34	ER20	1.2	3033-514
BT40-ER20-100-B	100	34	ER20	1.4	3033-515
BT40-ER25-70-B	70	42	ER25	1.2	3033-518
BT40-ER25-100-B	100	42	ER25	1.45	3033-519
BT40-ER32-70-B	70	50	ER32	1.3	3033-521
BT40-ER32-100-B	100	50	ER32	1.5	3033-522
BT30-ER11M-100-B	100	16	ER11	0.5	3033-523
BT30-ER16M-100-B	100	22	ER16	0.55	3033-524
BT30-ER20M-100-B	100	28	ER20	0.65	3033-525
BT40-ER11M-100-B	100	16	ER11	1.05	3033-526
BT40-ER16M-100-B	100	22	ER16	1.1	3033-527
BT40-ER20M-100-B	100	28	ER20	1.2	3033-528

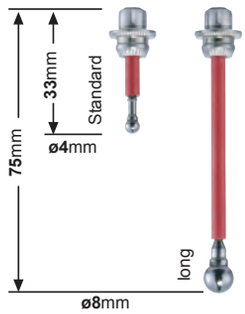
3D-Taster

ORDER NO.V-3D CODE NO.3219-001

Find your exact zero points in all three axes in seconds with the new distance measuring scale (graduated and analogue).

- Black scale for radial deflection.
- Red scale for axial deflection
- Precise and effortless calipering of fixtures and workpiece edges.
- Setting of NC-programme zero points in seconds.
- Measuring of clamped workpieces.
- Generous overrun allowances prevent damage to Taster stylus.
- Easy and precise change of stylus.
- Weight: 0.93KGS





STYLUS

Change stylus in seconds

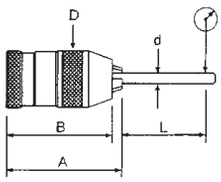
No screws or special tools required

Easy precision plug-in mechanism

ORDER NO.	TYPE	WEIGHT	CODE NO.
V-3D-05	ø4x33 standard stylus	10g	3219-005
V-3D-06	ø8x75 long stylus	15g	3219-006

TYPE	ACCURACY
3D-Taster	0.01mm

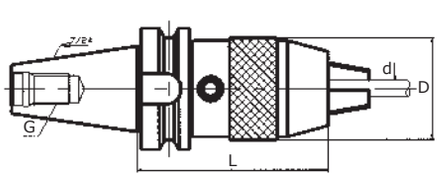
Integrated Type Keyless Drill Chucks



ORDER NO.	Clamping Capacity		Taper	OUTER Ø / mm	WEIGHT (kgs)	CODE NO.
	mm	inch				
INT-8-CAT30	0.5-8	1/64″-1/8″	CAT30	Ø35	0.8	3301-073
INT-13-CAT30	0.5-13	1/64″-1/2″		Ø51.5	1	3301-074
INT-8-CAT40	0.5-8	1/64″-1/8″	CAT40	Ø35	1.32	3301-075
INT-13-CAT40	0.5-13	1/64″-1/2″		Ø51.5	2.1	3301-076
INT-16-CAT40	3-16	1/8″-5/8″		Ø58	2.26	3301-077
INT-13-CAT50	0.5-13	1/64″-1/2″	CAT50	Ø51.5	3.95	3301-078
INT-16-CAT50	3-16	1/8″-5/8″		Ø58	4.2	3301-079

Integrated Type Keyless Drill Chucks

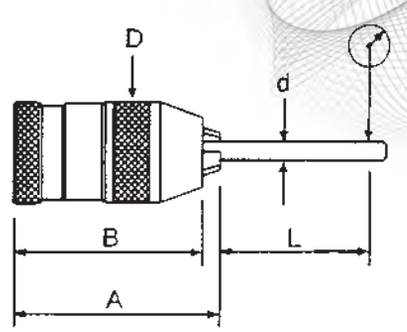
RL type keyless drill chuck with BT SHANK



- RL type drill has reinforce torque design to increase more clamping capacity.
- Right turn and left turn allowable.
- No sudden drop when stop or suddenly shift to different direction.
- Highest speed 6000rpm.
- Shorten the shank length which is stronger than traditional design improves the total rigidity.

ORDER NO.	Clamping Capacity mm / d	L	D	G	CODE NO.
BT40-VRL13	0.5-13	95	50	M16	3301-090
BT40-VRL16	3-16	113	57	M16	3301-091
SK40-VRL13	0.5-13	85	50	M16	3301-092
SK40-VRL16	3-16	95	57	M16	3301-093

Integrated Type Keyless Drill Chucks



STANDARD ACCES.

The main-shafts is of integrated type, which is much more superior than the traditional design.
The major features are as follows:

- Extremely rigid construction.
- The accumulative tolerances can be reduced to a minimum, since the traditional mechanism requiring an ARBOR to connect the Drill Chucks which will generate the accumulative tolerances.
  The Integrated type Keyless Drill Chuck is designed to solve this problem totally.
- Prevent the Drill Chucks from falling out.
- Extremely safe in operation.

ITEM NO.	d mm	L mm	Max Tolerance mm	Torque kgf-cm
INT-8	3	25	0.05	160
	6			
	8	30		
INT-10	3	25	0.05	260
	6			
	10	30		
INT-13	5	30	0.05	400
	10			
	13	25		
INt-16	5	25	0.05	480
	10			
	16	30		

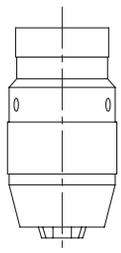
ORDER NO.	Clamping Capacity		Female Taper DIN or Jacobs	STD	OUTER Ø / mm	Length		WEIGHT (kgs)	CODE NO.
	Ø mm	Ø inch				Open B mm	Closed A mm		
INT-8-MT-2	0-8	0-5/16″	MT-2		35	140	148	0.8	3301-030
INT-8-JC-20	0-8	0-5/16″	JC-20		35	124	132	0.8	3301-031
INT-8-BT30	0.5-8	1/64″-1/8″	BT30		35			1	3301-070
INT-8-BT40	0.5-8	1/64″-1/8″	BT40		51.5			1.5	3301-072
INT-8-NT30	0.5-8	1/64″-1/8″	NT30		51.5			0.8	3301-080
INT-8-NT40	0.5-8	1/64″-1/8″	NT40		51.5			1.3	3301-081
INT-13-R8	1-13	0-1/2″	R8		51.5	183	175	1.5	3301-032
INT-13-MT2	1-13	0-1/2″	MT-2		51.5	184	172	1.3	3301-082
INT-13-MT3	1-13	0-1/2″	MT-3		51.5	182	194	1.4	3301-033
INT-13-MT4	1-13	0-1/2″	MT-4		51.5	182	194	1.8	3301-034
INT-13-JC-20	1-13	0-1/2″	JC-20		51.5	138	150	1.4	3301-035
INT-13-JC-25	1-13	0-1/2″	JC-25		51.5	138	150	1.6	3301-036
INT-13-JC-32	1-13	0-1/2″	JC-32		51.5	138	150	1.8	3301-037
INT-13-NT30	1-13	0-1/2″	NT-30		51.5	138	150	1.4	3301-038
INT-13-NT40	1-13	0-1/2″	NT-40	DIN 2080	51.5	98	109	1.8	3301-039
INT-13-BT30	0.5-13	1/64″-1/2″	BT30		51.5			1.4	3301-071
INT-13-BT40	1-13	0-1/2″	BT-40	ISO	51.5	98	109	2	3301-040
INT-13-BT50	1-13	0-1/2″	BT-50	ISO	51.5	109	120	4.7	3301-041
INT-13-NT50	1-13	0-1/2″	NT-50		51.5			4.3	3301-059
INT-16-R8	3-16	1/8″-5/8″	R8		58	188	202	1.9	3301-042
INT-16-MT3	3-16	1/8″-5/8″	MT3		58	188	202	1.9	3301-043
INT-16-MT4	3-16	1/8″-5/8″	MT4		58	188	202	2	3301-044
INT-16-JC-20	3-16	1/8″-5/8″	JC-20		58	140	155	1.8	3301-045
INT-16-JC-25	3-16	1/8″-5/8″	JC-25		58	150	165	1.7	3301-046
INT-16-JC-32	3-16	1/8″-5/8″	JC-32		58	150	165	2.2	3301-047
INT-16-NT40	3-16	1/8″-5/8″	NT-40	ISO	58	116	130	2.6	3301-049
INT-16-BT40	3-16	1/8″-5/8″	BT-40	ISO	58	116	130	2.5	3301-050
INT-16-BT50	3-16	1/8″-5/8″	BT-50		58	126	140	5	3301-051
INT-16-NT50	3-16	1/8″-5/8″	NT-50		58			4.5	3301-056

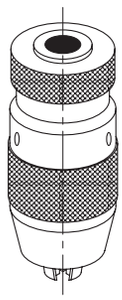
Please notify Taper or Jacobs size when ordering.

Keyless Drill Chucks

TYPE: XHSP — SPECIAL HEAVY DUTY TYPE

OPTIONAL ACCES.





- Special design & manufacture against for super heavy torque(Clamping capacity) use.
- Owing to inspecting strictly & with excellent RUNOUT Accuracy and quality guanteed the gripping power is double than the general brand.
- Avoid the drill dropped when used in instaneous change of direction and equipped with spanner hole for tightening perfect safety.
- Especially suitable for CNC machining center & milling machine use.
- Accuracy: 50mm length within 0.05mm
- The key is optional

Unit:mm

ORDER NO.	TYPE	Clamping Capacity Ø mm	Clamping Capacity Ø inch	Female Taper DIN or Jacobs	OUTER Ø / mm	Length Open B mm	Length Closed A mm	Wt g	QTY Pcs./ Cu-Ft	N.W/G.W kgs	CODE NO.
11015	8XHSP	0-8	0-5 / 16″	B10	36	61	69	320	40/0.6	13/14	3302-002
11016				J1	36	61	69	320	40/0.6	13/14	3302-003
11017				B12	36	61	69	320	40/0.6	13/14	3302-004
11018	10XHSP	0-10	0-3 / 8″	J33	43	81	92	700	40/0.6	28/29	3302-005
11019				J2S	43	81	92	700	40/0.6	28/29	3302-006
11020				B12	43	81	92	700	40/0.6	28/29	3302-007
11021				B16	43	81	92	700	40/0.6	28/29	3302-008
11025	13XHSP	0-13	0-1 / 2″	J6	51.5	92	103	1030	30/0.6	31/32	3302-009
11026				J33	51.5	92	103	1035	30/0.6	31/32	3302-010
11027				B16	51.5	92	103	1030	30/0.6	31/32	3302-011
11028	16XHSP	3-16	1/8 - 5/8″	J6	58	95	108	1450	24/0.6	35/36	3302-012
11029				B16	58	95	108	1450	24/0.6	35/36	3302-013
11030				B18	58	95	108	1450	24/0.6	35/36	3302-014
11035				J3	58	95	108	1450	24/0.6	35/36	3302-015
17000	6XHSP	0.5-6.5	1/64″- 1/4″	B12	34	61	69	320	8/0.6	26/27	3304-010
17002				J1	34	61	69	320	8/0.6	26/27	3304-011
17004				B10	34	61	69	320	8/0.6	26/27	3304-012
11031	Key	13XHSP									3304-001
11032		16XHSP									3304-002
11033		8XHSP									3304-003
11034		10XHSP									3304-004

Keyless Drill Chucks

TYPE: H — STANDARD TYPE

- Industrial design especially for life and safety while in operation.
- All hardened parts ensure long term for milling machines and drilling.
- Accuracy: 35 m/m length within 0.08 m/m

Unit:mm

ORDER NO.	TYPE	Clamping Capacity Ø mm	Clamping Capacity Ø inch	Female Taper DIN or Jacobs	OUTER Ø mm	Length Open B mm	Length Closed A mm	Wt g	CODE NO.
11061	6H	0-6.5	0-1 / 4″	J1	34	61	69	410	3302-030
11062				B10	34	61	69	400	3302-031
11063	8H	0-8	0-5 / 16″	J1	34	61	69	400	3302-032
11064				B10	34	71	69	400	3302-033
11065	10H	0-10	0-3 / 8″	J2S	42.5	81	92	720	3302-034
11066				J33	42.5	81	92	700	3302-035
11067				B12	42.5	81	92	720	3302-036
11068				B16	42.5	81	92	700	3302-037
11070	13H	0-13	0-1 / 2″	J6	50.5	92	103	1070	3302-039
11071				J33	50.5	92	103	1035	3302-040
11072				B16	50.5	92	103	1080	3302-041
11073	16H	3-16	1/8 - 5/8″	J6	50.5	92	103	1070	3302-042
11074				B16	50.5	92	103	1080	3302-043
11075				B18	50.5	97	108	1090	3302-044

Keyless Drill Chucks

TYPE:S

HEAVY DUTY TYPE S

Extremely high accuracy and precision design, suitable for CNC machines and machine center. All parts are ground,heat treated,surface treated and under specific QC condition.

ORDER NO.	Size	Capacity		Taper Mount No DIN or Jacabs	Length(m/m)		Outer Dia (m/m)	Weight (g)	CODE NO.
		mm	inch		Open	Closed			
12201-1	8S	0-8	0-5/16	JT1	68	76	38	460	3302-060
12201-2				JT2S	68	76	38	450	3302-061
12201-3				B10	68	76	38	420	3302-062
12201-4				B12	68	76	38	450	3302-063
12202-1	10S	0-10	0-3/8	JT2	80	92	43	660	3302-064
12202-2				JT33	80	92	43	630	3302-065
12202-3				B10	80	92	43	640	3302-066
12202-4				B12	80	92	43	670	3302-067
12203-1	13S	0-13	0-1/2	JT33	90	102	49	970	3302-068
12203-2				JT6	90	102	49	1020	3302-069
12203-3				B12	90	102	49	1040	3302-070
12203-4				B16	90	102	49	1030	3302-071
12205-1	16S	3-16	1/8-5/8	JT6	97	110	55	1330	3302-073
12205-2				JT3	97	110	55	1330	3302-074
12205-3				B16	97	110	55	1340	3302-075
12205-4				B18	97	110	55	1360	3302-076

Keys

ORDER NO.	Type	Dmm	Lmm	Weight(g)	Packing	CODE NO.
14001	T1	3.2	35	20	Unpacked	3304-100
14002	T2	4	42	40		3304-101
14003	T3	5.5	44	45		3304-102
14004	T4	S2	45	55		3304-103
14005	T5	6.5	45	50		3304-104
14007	T7	8	50	80		3304-106
14008	T8	9.5	65	150		3304-107
14009	T9	11	100	320		3304-108
14010	P1	4	42	40		3304-109
14011	P2	5.5	44	45		3304-110
14012	P3	6	45	55		3304-111
14013	P4	6.5	45	50		3304-112
14014	P5	7	45	50		3304-113
14015	P6	8	50	80		3304-114
14016	P7	9.5	65	150		3304-115
14101	CK1	5/32	361	25		3304-117
14102	CK2	1/4	-	-		3304-118
14104	CK4	3/8	74	180		3304-120
14105	K30	15/64	43	40		3304-121
14106	K32	1/4	50	60		3304-122
14108	KG	1/4	35	25		3304-124

Key Type Drill Chucks

TYPE: G

- Representative products, super precision durable & rigity
- Big outside diameter suit for heavy duty
- The nut and jaws adopt AISI-52100 (bearing steel) and heat-treated, durability the precision can be lssted.
- The taper is precision ground, advance the precision.
- Accuracy: 90mm length within 0.08mm
- With keys

ORDER NO.	TYPE	Clamping Capacity		Female Taper DIN or Jacobs	OUTER Ø / mm	Length		Wt g	Key Size	QTY Pcs./ Cu-Ft	N.W/G.W kgs	CODE NO.
		mm	inch			Open B mm	Closed A mm					
10006	G-6H	0.5-6.5	1/64″-1/4″	J1	32	40	50	200	CK3	100/0.82	20/21	3303-001
10017	G-10XH	0.5-10	1-64″-3/8″	J2	41.5	50.5	64	390	CK4	60/0.85	24/25	3303-003
10018				J2S	41.5	50.5	64	390	CK4	60/0.85	24/25	3303-004
10050	G-13XH	0.5-13	1/64″-1/2″	J6	56	69	82	800	P6	36/0.83	30/31	3303-006
10051				B16	56	69	82	800	P6	36/0.83	30/31	3303-007
10052				J33	56	69	82	800	P6	36/0.83	30/31	3303-008
10068	G-16XH	1-16	1/32″-5/8″	J3	65	78	96	1000	P7	24/0.84	24/25	3303-009
10070				B18	65	78	96	1000	P7	24/0.84	24/25	3303-010
10074	G-19XH	3-19	1/8″-3/4″	J4	74	89	126	2150	P7	18/0.83	39/40	3303-011

Ball Bearing Key Type Super Chucks

TYPE: H

- Suitable for heavy duty drilling use.
- By using anti-thrust bearing to increase the gripping power so that high speed drilling can be performed.
- All parts hardened by heat treatment and precision ground precision can be lasted, super clamping power.
- Accuracy:100m/m length is within 0.08m/m
- With keys

ORDER NO.	TYPE	Clamping Capacity		Female Taper DIN or Jacobs	OUTER Ø / mm	Length		Wt g	Key Size	CODE NO.
		mm	inch			Open B mm	Closed A mm			
12011	10BXH	1-10	1/32″-3/8″	J2S	45	56	64	390	P4	3303-030
12006	13BXH	1-13	1/32″-1/2″	J3						3303-031
12001				J6	62	75	95	1200	P6	3303-032
12002				J33						3303-033
12003	16BXH	1-16	1/32″-5/8″	J3	65	81	101	1500	P7	3303-034
12005	19BXH	1-19	1/32″-3/4″	J4	74	100	130	2150	P7	3303-036
12007	25BXH	5-25	3/16″-1″	J5	93	112	153	4100	T9	3303-037

Key Type Drill Chucks

- Suitable for use on heavy duty & extra heavy duty.
- For milling machine, lathe, drill machine & wood working machine.
- With keys

ORDER NO.	TYPE	Clamping Capacity		Female Taper DIN or Jacobs	Female Thread Inch or metic	OUTER Ø / mm	Length		Wt g	Key Size	CODE NO.
		mm	inch				Open B mm	Closed A mm			
10001	4H	0.5-4	1/64″-5/32″	JO		22	29	35	120	T1	3303-060
10002B	5HB	0.5-6		5D		27.5	33	43	100	T2A	3303-061
10003	6H	0.5-6.5	1/64″-1/4″	J1		32	40	50	230	T2	3303-062
10004				B10		32	40	50	190	T2	3303-063
10010	10H	1-10	1/32″-3/8″	J2		38	50.5	64	320	T3	3303-065
10010-3					1/2-20	38	50.5	64	290	T3	3303-065-3
10011				J2S		38	50.5	64	320	T3	3303-066
10012				B12		38	50.5	64	330	T3	3303-067
10038	13H	1-13	1/32″-1/2″	J2S		47	65	81	520	T5	3303-071
10038-2					3/8-24	47	65	81	520	T5	3303-071-2
10038-3					1/2-20	47	65	81	330	T5	3303-071-3
10039				J6		47	65	81	570	T5	3303-072
10040				B16		47	65	81	580	T5	3303-073
10041				J33		47	65	81	580	T5	3303-074
10061	16H	1-16	1/32″-5/8″	J6		56	78	96	990	T7	3303-077
10062				J3		56	78	96	960	T7	3303-078
10063				B16		56	78	96	990	T7	3303-079
10063-2					1/2-20	56	78	96	800	T7	3303-079-2
10063-3					5/8-16	56	78	96	800	T7	3303-079-3
10064				B18		56	78	96	970	T7	3303-080
10072	19H	3-19	1/8″-3/4″	B22		67.5	89	126	1660	T8	3303-083
10073				J3		67.5	89	126	1680	T8	3303-084
10046	13XH	1-13	1/32″-1/2″	J6	1/2-20	52	69	82	770	T7	3303-086
10047				B16	1/2-20	52	69	82	830	T7	3303-087
10048				J33	1/2-20	52	69	82	770	T7	3303-088
10079	19XH	1-19		J4		69	94	132	1720	T8	3303-089

Material Analysis Table

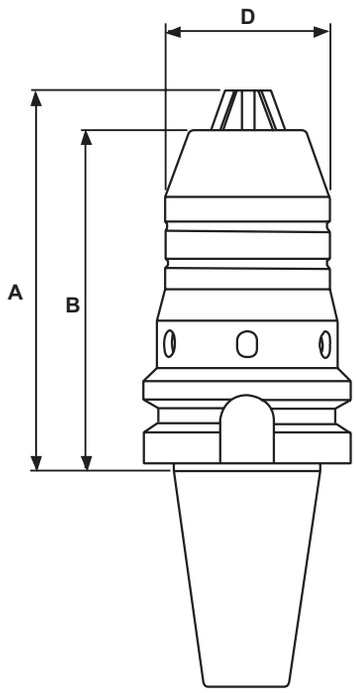
PART NO.	PART NAME	MATERIAL	HEAT TREATED
1	Body	JIS-4051 SAE 1045	HRC45-48
2	Case	JIS-4018 SAE 1018	HRC38-40
3	Jaw	JIS-4051 SAE 1045	HRC52±2
4	Nut	JIS-4051 SAE 1045	HRC61±2

Run-out Accuracy & Torque Inspection Table

Type	4H	5H	6.5H	10H	13H	16H	19H	13XH	19XH
Ødmm	3.5	4.5	6	9	12	15	18	12	18
Lmm	60	80	90	110	140	150	150	140	150
L1mm	40	60	70	85	110	120	120	110	120
Max Run-out	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Torque kg-m	18	20	45	75	85	250	300	190	300

Powerful Integrated Drill Chucks

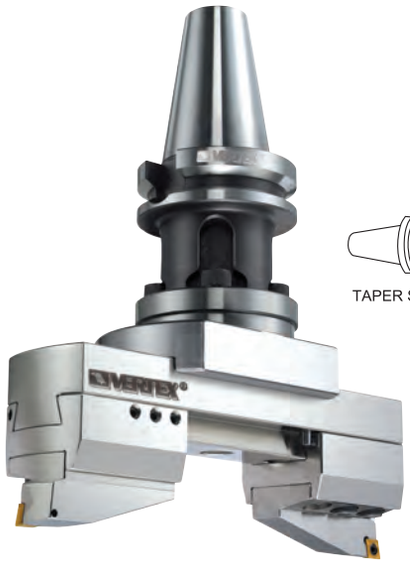
MAS 403 BT

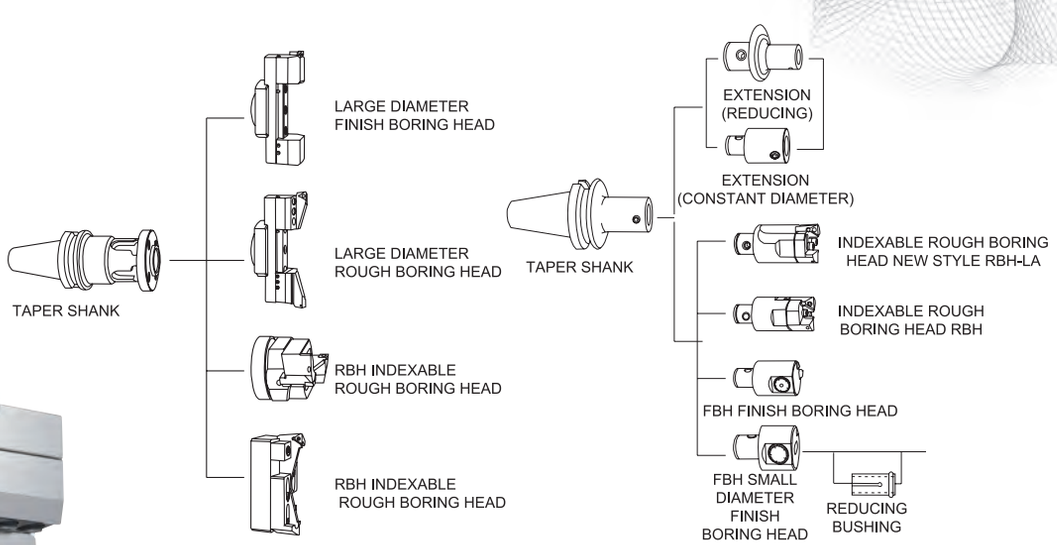


- The shank and keyless drill chuck are combined as one body so that the drill chuck will not be fallen out when heavy cutting is being performed.
- High precision can be maintained over a long period of time.
- The drill will not be dropped out when the main spindle of machine is instantly stopped.
- (1) 2-way machining function-clockwise (CW) and counter-clockwise (CCW).
  (2) Built in torque setting and anti-loose device.
  (3) External hook locking type doesn't need a hex wrench which is ease to be worn out and became slippery.
  (4) Fast locking ring outside the arbor.
- The traditional or conventional holding needs a lot of chucks, the cost is very high.
  New tech brings you convenience and the lowest cost.
- No more frequently change, save your time and money.
- The tolerance can reach to 0.05mm or better.
- Suit for every kind of machine tool cutters. Capable of drilling, tapping, twist milling and so on.

ORDER NO.	Mount Type	Size	Capacity		Dimensions			Weight (g)	CODE NO.
			mm	inch	Closee A mm	Open B mm	sleeve D mm		
PNT-8-BT-30	BT30	8mm	0-8	0-5/16	92	83	37.5	820	3303-151
PNT-13-BT-30	BT30	13mm	0-13	0-1/2	115	102	50		3303-152
PNT-8-BT-40	BT40	8mm	0-8	0-5/16	96	87	37.5		3303-153
PNT-13-BT-40	BT40	13mm	0-13	0-1/2	115	102	50	1900	3303-154
PNT-16-BT-40	BT40	16mm	3-16	1/8-5/8	121.5	108.5	57		3303-155
PNT-8-BT-50	BT50	8mm	0-8	0-5/16	106	98	37.5		3303-156
PNT-13-BT-40	BT50	13mm	0-13	0-1/2	126.2	115.5	50		3303-157
PNT-16-BT-50	BT50	16mm	3-16	1/8-5/8	132.5	119.5	57		3303-158

Modular Boring Systems

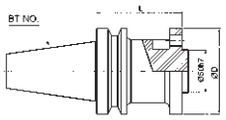


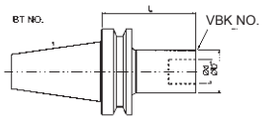


Taper Shank For Boring Heads Series BST, VBK

BST SERIES

VBK SERIES

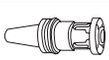
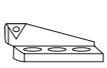




ORDER NO.	Length (L)	External Diameter (D)	Applicable Boring Heads	Weight (kgs)	CODE NO.
BT40-VBK1-75	75	19	FBH20	1.2	3320-220
BT40-VBK2-85	85	23	RBH25 ; FBH25	1.2	3320-221
BT40-VBK3-95	95	30	RBH32 ; FBH32	1.45	3320-222
BT40-VBK4-85	85	38	RBH40 ; FBH40 ; CBI4	1.5	3320-223
BT40-VBK5-75	75	50	RBH52 ; FBH25 ; CBI5	1.8	3320-225
BT40-VBK6-65	65	64	RBH68 ; RBH90 ; FBH68 FBH100 ; FBH150 ; CBI6	2.15	3320-227
BT40-BST-70	70	95	RBH120 ; FBH200 RBH120 and above; FBH200 and above	3.2	3320-228
BT50-VBK1-115	115	19	FBH20	3.5	3320-229
BT50-VBK2-110	110	23	RBH25 ; FBH25	4	3320-230
BT50-VBK3-125	125	30	RBH32	4.4	3320-232
BT50-VBK4-115	115	38	RBH40	4.8	3320-234
BT50-VBK4-175	175			5.2	3320-235
BT50-VBK5-105	105	50	RBH52	5.4	3320-236
BT50-VBK5-180	180			6.2	3320-237
BT50-VBK5-240	240			6.4	3320-238
BT50-VBK6-95	95	64	RBH68 ; RBH90 ; FBH68 FBH100 ; FBH150 ; CBI6	5.9	3320-239
BT50-VBK6-170	170			6.5	3320-240
BT50-VBK6-230	230			6.9	3320-241
BT50-BST-100	100	95	RBH120 RBH120 and above; FBH200 and above; large diameter boring heads series	5.71	3320-242
BT50-BST-200	200			8.79	3320-244
BT50-BST-300	300			11.25	3320-246
BT50-BST-400	400				3320-247

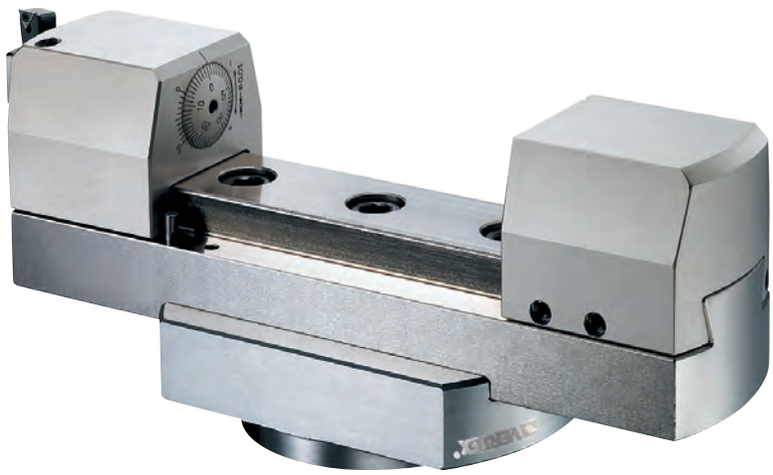
Large Diameter Twin-bit Rough Boring

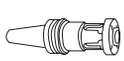
New Modular Style For Diameter Over 200mm
Boring diameter from ø200-ø1250mm

Boring Head Type	**ORDER NO.**		RBH 200LA	RBH 300LA	RBH 400LA	RBH 500LA	RBH 600LA	RBH 900LA
	Length		130	130	130	130	150	150
	(kgs) Total Weight Steel/Alloy		9.5/7.2	11.5/8.0	13.5/8.8	15.5/9.6	33/16	43/22.3
	D(mm) Boring Diameter		200-310	300-410	400-510	500-610	600-950	900-1250
Module	**Taper Shank**		BT50-BST / NT50-BST BT50-BST / NT50-BST Series				BT50-FMA-47.625	
	Flange (kgs)Weight Steel/Alloy		BR200 2.7				BR600 19kg/6.5kg	BR900 29kg/10kg
	Extension Slide		RST200	RST300	RST400	RST500	RST300 x2pcs	RST400 x2pcs
	(kg)Weight Steel/Alloy		3.4kg/1.1kg	5.4kg/1.9kg	7.4kg/2.7kg	9.4kg/3.5kg	10.8kg/3.8kg	14.8kg/5.4kg
	Clamp Base (kg)Weight		RS200 0.98 kg					
	Height Seting Shim (kg)Weight		RS201 0.05 kg					
	Insert Holder		RB200C12	RB200T16		RB200T22	RB200S12	
	Applicable Insert		CCMT120404	TCMT16T304		TCMT220404	SCMT120404	
	(kg)Weight		0.68KG					
	CODE NO.		3320-250	3320-251	3320-252	3320-253	3320-254	3320-255

Large Diameter Finish Boring Head

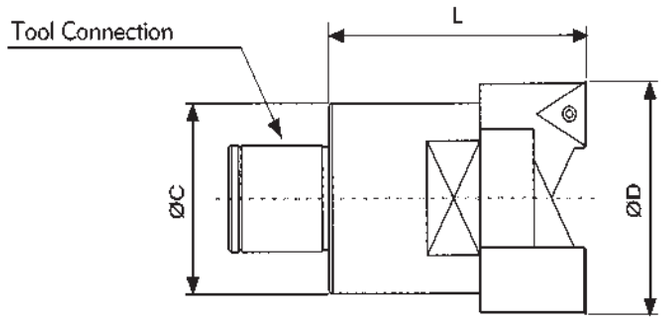
New Modular Style For Diameter Over 200mm
Boring diameter from ø200-ø1250mm



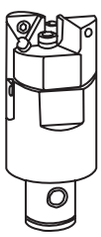
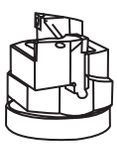
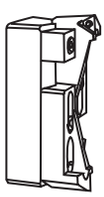
Boring Head Type	**ORDER NO.**		FBH200	FBH300	FBH400	FBH500	FBH600	FBH900
	Length		130	130	130	130	150	150
	(kgs) Total Weight Steel/Alloy		9.4	11.4	13.4	15.4	17.4	22.1
	D(mm) Boring Diameter		200-310	300-410	400-510	500-610	600-950	900-1250
Module	**Taper Shank**		BT50-BST / NT50-BST BT50-BST / NT50-BST Series				BT50-FMA-47.625	
	Flange (kg)Weight Steel/Alloy		BR200 2.7 kg				BR600 19kg/8.8kg	BR900 29kg/13.5kg
	Extension Slide		RST200	RST300	RST400	RST500	RST300 x2pcs	RST400 x2pcs
	(kgs)Weight		3.4kg	5.4kg	7.4kg	9.4kg	11.4kg	14.8kg
	Balance Weight (kg)Weight		RS200 1.6 kg					
	Finish Head (kgs)Weight		CB200 1.6kg					
	Applicable Insert		TP08/M2.2/T7, TP09/M2.5/T8, TC11/M2.5/T8					
	CODE NO.		3320-260	3320-261	3320-262	3320-263	3320-264	3320-265

Indexable Twin-bit Rough Boring Head RBH

VMH-SYSTEM **Boring diameter from ø25-ø350mm**



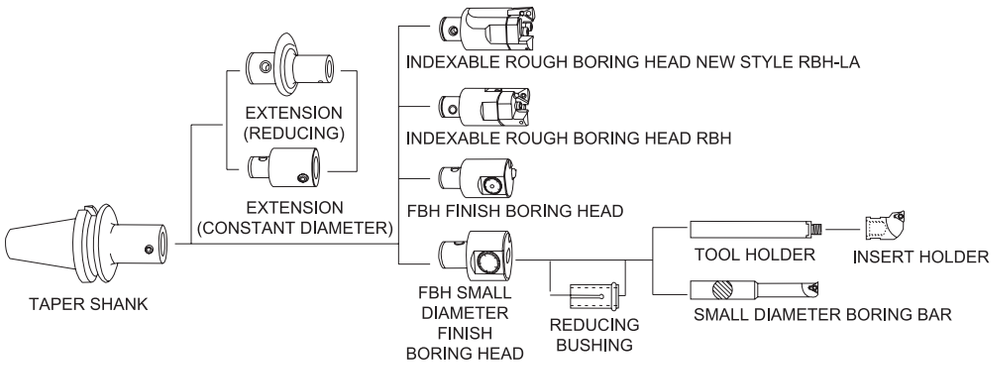
● INSERT STYLE -C ◆ -T ▲ -S ■

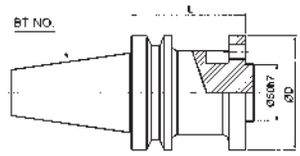
	ORDER NO.	Tool connection	D(mm) Boring Range		L (mm)	C (mm)	Insert	Weight (g)	CODE NO.
	RBH25-33-C	VBK2	25	33	45	24	CCMT060204	0.15	3320-270
	RBH32-42-C	VBK3	32	42	55	31	CCMT060204	0.3	3320-271
	RBH32-42-T						TCMT110204		3320-272
	RBH40-55-C	VBK4	40	55	65	39	CCMT09T304	0.5	3320-273
	RBH40-55-T						TCMT16T304		3320-274
	RBH40-55-S						SCMT09T304		3320-275
	RBH52-70-C	VBK5	52	70	75	50	CCMT09T304	1	3320-276
	RBH52-70-T						TCMT16T304		3320-277
	RBH52-70-S						SCMT09T304		3320-278
	RBH68-92-C	VBK6	68	92	85	64	CCMT120408	2	3320-279
	RBH68-92-T						TCMT16T304		3320-280
	RBH68-92-S						SCMT120404		3320-281
	RBH90-122-C	VBK6	90	122	100	80	CCMT120408	2.9	3320-282
	RBH90-122-T						TCMT220408		3320-283
	RBH90-122-S						SCMT120404		3320-284
	RBH120-164-C	BST	120	164	95	100	CCMT120408	3.8	3320-285
	RBH120-164-T						TCMT220408		3320-286
	RBH120-164-S						SCMT120404		3320-287
	RBH160-204-C		160	204		130	CCMT120408	4.8	3320-288
	RBH160-204-T						TCMT220408		3320-289
	RBH160-204-S						SCMT120404		3320-290
	RBH200-300-C	BST Series	200	300	95	170	CCMT120408	6.5	3320-291A
	RBH200-300-T						TCMT220408		3320-292A
	RBH200-300-S						SCMT120404		3320-293A
	RBH300-400-C		300	400		260	CCMT120408	10	3320-297A
	RBH300-400-T						TCMT220408		3320-298A
	RBH300-400-S						SCMT120404		3320-299A

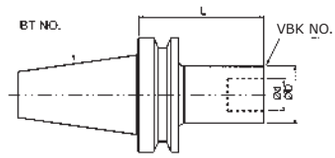
Taper Shank For Boring Heads Series BST, VBK

VERTEX®

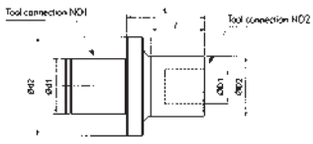
Modular Boring Systems





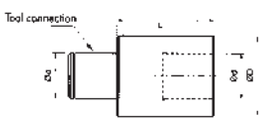


Extension (Reduced)



ORDER NO.	d1	d2	D1	D2	L	ℓ	Applicable Boring Heads	Weight (kg)	CODE NO.
VBK2-1-36L	14	24	11	19	36	30	FBH20	0.1	3320-301
VBK3-1-41L	18	31			41	30	FBH20	0.15	3320-302
VBK3-2-37L			14	24	37	25	RBH25 ; FBH25	0.15	3320-303
VBK4-1-58L	22	39	11	19	58	40	FBH20	0.3	3320-304
VBK4-2-50L			14	24	50	36	RBH25 ; FBH25	0.3	3320-305
VBK4-3-50L			18	31	50	37	RBH32 ; FBH32	0.35	3320-306
VBK5-1-60L	28	50	11	19	60	40	FBH20	0.45	3320-307
VBK5-2-54L			14	24	54	35	RBH25 ; FBH25	0.45	3320-308
VBK5-2-74L					74	55	RBH25 ; FBH25	0.5	3320-309
VBK5-3-47L			18	31	47	29	RBH32 ; FBH32	0.5	3320-310
VBK5-3-72L					72	54	RBH32 ; FBH32	0.6	3320-311
VBK5-4-42L			22	39	42	25	RBH40 ; FBH40	0.5	3320-312
VBK5-4-67L					67	50	RBH40 ; FBH40	0.7	3320-313
VBK6-1-70L	36	64	11	19	70	40	FBH20	0.9	3320-314
VBK6-2-63L			14	24	63	45	RBH25 ; FBH25	0.7	3320-315
VBK6-2-93L					93	75	RBH25 ; FBH25	0.8	3320-316
VBK6-3-56L			18	31	56	39	RBH32 ; FBH32	0.75	3320-317
VBK6-3-96L					96	79	RBH32 ; FBH32	0.95	3320-318
VBK6-4-51L			22	39	51	35	RBH40 ; FBH40	0.85	3320-319
VBK6-4-101L					101	85	RBH40 ; FBH40	1.3	3320-320
VBK6-5-41L			28	52	41	25	RBH52 ; FBH52	0.85	3320-321
VBK6-5-91L					91	75	RBH52 ; FBH52	1.45	3320-322

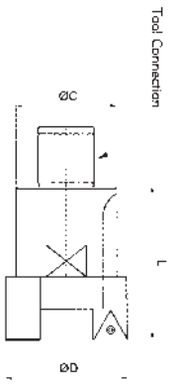
Extension (Constant Diameter)

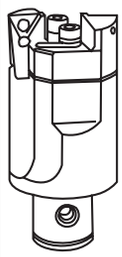
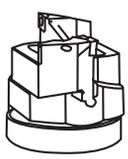
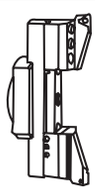


ORDER NO.	d	D	L	Applicable Boring Heads	Weight (kg)	CODE NO.
VBK1-1-30L	11	19	30	FBH20	0.07	3320-323
VBK2-2-30L	14	24	30	RBH25 ; FBH25	0.1	3320-324
VBK3-3-30L	18	31	30	RBH32 ; FBH32	0.15	3320-325
VBK4-4-45L	22	39	45	RBH40 ; FBH40 ; CBI4	0.4	3320-326
VBK5-5-60L	28	50	60	RBH52 ; FBH52 ; CBI5	0.8	3320-327
VBK6-6-60L	36	64	60	RBH68/RBH90 ; FBH68, 100, 150 ; CBI6	1.4	3320-328

Indexable Twin-bit Rough Boring Head RBH-LA

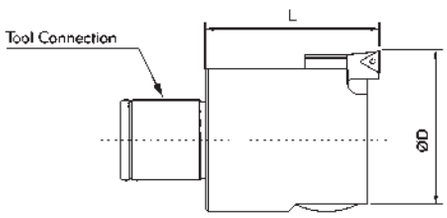
Boring ronge from ø25mm to ø1250mm;
a variety of tool holders and boring heads are for your selection.



	ORDER NO.	Tool connection	D(mm) Boring Range	L (mm)	C (mm)	Insert	Weight (g)	CODE NO.
	RBH25-35LA-C	VBK2	25~35	50	24	CCMT060204	0.15	3320-340
	RBH32-45LA-C	VBK3	32~45	60	31	CCMT060204	0.3	3320-341
	RBH32-45LA-T					TCMT110204		3320-342
	RBH40-55LA-C	VBK4	40~55	74	39	CCMT09T304	0.6	3320-343
	RBH40-55LA-T					TCMT16T304		3320-344
	RBH40-55LA-S					SCMT09T304		3320-345
	RBH52-75LA-C	VBK5	52~75	80	50	CCMT09T304	1	3320-346
	RBH52-75LA-T					TCMT16T304		3320-347
	RBH52-75LA-S					SCMT09T304		3320-348
	RBH68-100LA-C	VBK6	68~100	90	66	CCMT120408	2.5	3320-349
	RBH68-100LA-T					TCMT16T304		3320-350
	RBH68-100LA-S					SCMT120404		3320-351
	RBH90-130LA-C	VBK6	90~130	100	88	CCMT120408	3.1	3320-352
	RBH90-130LA-T					TCMT16T304		3320-353
	RBH90-130LA-S					SCMT120404		3320-354
	RBH120-164LA-C	BST	120~164	95	100	CCMT120408	3.8	3320-355
	RBH120-164LA-T					TCMT220408		3320-356
	RBH120-164LA-S					SCMT120404		3320-357
	RBH160-204LA-C		160~204		130	CCMT120408	4.8	3320-358
	RBH160-204LA-T					TCMT220408		3320-359
	RBH160-204LA-S					SCMT120404		3320-360
	RBH200-310LA	BST Series	200~310	130	180	Optional Inserts CCMT120408 TCMT16T304 TCMT220408 SCMT120404	9.5	3320-361
	RBH300-410LA		300~410		280		11.5	3320-362
	RBH400-510LA		400~510		380		13.5	3320-363
	RBH500-610LA		500~610		480		15.5	3320-364
	RBH600-950LA	FMA-47.625	600~950	150	580		33	3320-365
	RBH900-1250LA		900~1250		680		43	3320-366

FBH Finish Boring Head

Boring diameter from ø20-ø1250mm



Ordering Example

FBH — Head Type
52-75 — Boring Diameter
VBK5 — Tool Connection

FEATURES:

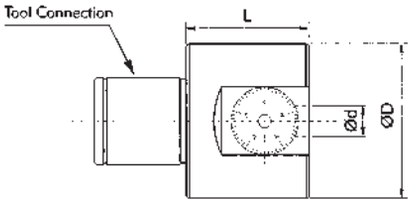
- FBH finish boring head is suitable for finish boring with working ranges from Ø20mm to Ø1250mm on diameter.
- The dial has been graduated into 50 divisions, each of which is 0.01mm on diameter. Available is a sub-dial for finer adjustment.
- High precision internal lead screw with inner lubrication is free from the effects of chip, featuring high durability.
- Coolant nozzle easily cools the insert and prolongs insert's working life.
- Cartridge unit is housed in a square structure with two face support, proving high stability and rigidity.

ORDER NO. / Boring Head Type	Tool Connection	ØD Boring Range	length	Weight (kg)	Insert Clamping Screw	CODE NO.
FBH20	VBK1	20-26	35	0.1	TB06/M2/T6 TP08/M2.2/T7 TC09/M2.2/T7	3320-370
FBH25	VBK2	25-33	40	0.2		3320-371
FBH32	VBK3	32-42		0.3		3320-372
FBH40	VBK4	40-55	50	0.5		3320-373
FBH52	VBK5	52-75	60	1	TP08/M2.2/T7 TP09/M2.5/T8 TC11/M2.5/T8	3320-374
FBH68	VBK6	68-102	70	2		3320-375
FBH100	VBK6	100-152		2.9		3320-376
FBH150	VBK6	150-202		4.2		3320-377
FBH200S	BST Series	200-310	130	9.7		3320-378
FBH300S		300-410		11.7		3320-379
FBH400S		400-510		13.7		3320-380
FBH500S		500-610		15.7		3320-381
FBH600S	FMA-47.625	600-900	150	33		3320-382
FBH900S		900-1250		43		3320-383

FBH Finish Boring Head

Boring diameter from Ø3 - Ø40mm

BORING CAPACITY
CBI4 Ø8 - Ø20 m/m
CBI5 Ø12 - Ø40 m/m
CBI6 Ø8 - Ø40/m/m

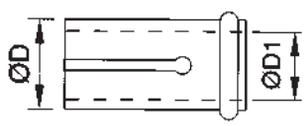


FEATURES:

- Available are three different styles enabling small diameter boring from Ø8mm to Ø40mm. Boring range can be within Ø3mm to Ø10mm if small diameter solid carbide boring bar has been employed.
- The dial has been graduated into 50 divisions, each of which is 0.01mm on diameter. Available is a subdial for finer adjustment.
- High precision internal lead screw with inner lubrication is free from the effects of chip, featuring high durability.
- Cartridge unit is housed in a square structure with two face support, proving high stability and rigidity.

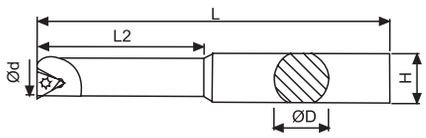
ORDER NO. / Boring Head Type	Tool Connection	ØD Internal Diameter	ØD External Dimeter	length	mm feed	Weight (kg)	CODE NO.
CBI4	VBK4	10	39	32	0-2	0.4	3320-390
CBI5	VBK5	12	50	40	0-3.5	0.8	3320-391
CBI6	VBK6	16	64	50	0-5	1.4	3320-392

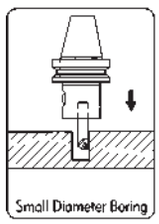
BORING BAR SLEEVE FOR CBI6



ORDER NO.	D mm	D1 mm	Applicable Carbide Tool Holder	CODE NO.
EC1608	16	8	ST08-W5-...,HC08	3320-393
EC1610	16	10	ST10-W6...,HC10	3320-394
EC1612	16	12	ST12-W6...,HC12	3320-395

Small Diameter Boring Head CBI4





FOR CBI4 BORING CAPACITY FROM Ø8 - Ø20MM

ORDER NO.	ØD mm	Ød mm	L mm	L2 mm	H mm	Insert	Clamp Screw	Wrench	CODE NO.
BJ1008-32	10	8	64	32	9	TBGT060104 KYOCERA	M2	T6	3320-400
BJ1010-40		10	72	40					3320-401
BJ1012-45		12	77	27		TPGB090204 KYOCERA	M2.5	T8	3320-402
BJ1016-45		16	77	27					3320-403
BJ1020-45		20	77	27		TPGB090204 KYOCERA	M2.5	T8	3320-404
※BJ10-5PCS/SET	BJ1008-32 BJ1010-40 BJ1012-45 BJ1016-45 BJ1020-45								3320-405

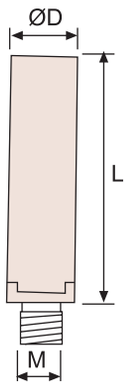
FOR CBI6 BORING CAPACITY FROM Ø8 - Ø40MM

ORDER NO.	ØD mm	Ød mm	L mm	L2 mm	H mm	Insert	Clamp Screw	Wrench	CODE NO.
BJ1608-32	16	8	74	32	15	TBGT060104 KYOCERA	M2	T6	3320-406
BJ1610-40		10	75	40					3320-407
BJ1612-53		12	85	53		TPGB090204 KYOCERA	M2.5	T8	3320-408
BJ1616-68		16	100	68					3320-409
BJ1620-83		20	115	83		TPGB090204 KYOCERA	M2.5	T8	3320-410
BJ1625-90		25	122	90					3320-411
BJ1630-90		30	122	90					3320-412
BJ1640-90		40	122	90					3320-413
※BJ16-8PCS/SET	BJ1608-32 BJ1610-40 BJ1612-53 BJ1616-68 BJ1620-83 BJ1625-90 BJ1630-90 BJ1640-90								3320-414

Carbide Tool Holder

Small Dimeter Modular Boring Bar

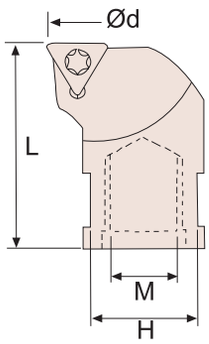
Boring diameter from Ø8 - Ø16mm



ORDER NO.	L mm	D mm	M mm	Applicable Insert Holder	Applicable Bushing	CODE NO.
ST08-W5-100	100	8	M5	BE09A, BE10.5A	EC1608	3320-420
ST10-W6-110	110	10	M6	BE12A	EC1610	3320-421
ST12-W6-120	120	12		BE14A, BE16A	EC1612	3320-424
ST16-W10-160	160	16	M10	BE18A,BE20A,BE22A,BE24A BE26A,BE28A,BE30A,BE32A BE34A,BE36A,BE38A,BE40A	---	3320-426

Insert Holder For Carbide Tool Holder

Boring diameter from Ø9 - Ø40mm



ORDER NO.	d(mm)	H(mm)	L(mm)	M(mm)	Insert	Clamping Screw	Wrench	CODE NO.
BE09A	9	7	18	M5	TPGT080204L SUMITOMO	M2.2	TF7	3320-430
BE10.5A	10.5	7	23	M6				3320-431
BE12A	12	8						3320-432
BE14A	14	10						3320-433
BE16A	16	10	27	M10				3320-434
BE18A	18	14						3320-435
BE20A	20	14						3320-436
BE22A	22	14						3320-437
BE24A	24	14						3320-438
BE26A	26	14						3320-439
BE28A	28	14						3320-440
BE30A	30	14						3320-441
BE32A	32	14						3320-442
BE34A	34	14						3320-443
BE36A	36	14						3320-444
BE38A	38	14						3320-445
BE40A	40	14						3320-446

RBH Indexable Twin-bit Rough Boring Head

Boring diameter from Ø25 - Ø350mm

- The head is suitable for single bit boring, twin-bit boring and step boring with working diameter from Ø25mm to Ø350mm on diameter.
- New cartridge style with built-up rib. The pressure imposed on both cartridges counteracts producing highest rigidity and cutting efficiency, most suitable for a variety of borings.
- Boring head can be easily abjusted to different boring needs for machining on demand. Boring depth can be extended by tool connection.
- Clear side division provides a convenient adjustment without using a tool pre-setter.
- Most suitable for boring on various machine centers or boring mills. Universal design accepts inserts of any brands, which will reduce tool grinding and greatly improve boring performance.
- Patented step boring design; suitable for both level boring and step boring.

Indexable Twin-bit Rough Boring Head RBH-LA

Boring diameter from Ø25 - Ø200mm

- Thickened cartridge with higher rigidity.
- Coolant nozzle easily cools the insert elongating its working life.
- Completed with chip pocket, improving chip flow of deep boring.
- Clamp plate solidifies cartridges and head, upgrading cutting rigidity.
- Patented step boring design; suitable for both level boring and step boring.

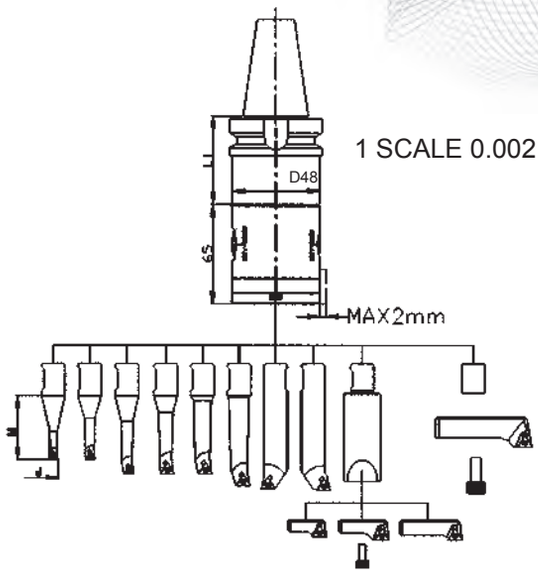
Large Diameter Modular Rough Boring Head With Diameter Over Ø200mm

Boring diameter from Ø200 - Ø810mm

- This type is suitable for large diameter boring with ranges from 200mm to 810mm.
- The structure includes common flange and extension slide for both rough and finish boring heads. Adjustment range is within 110mm on diameter.
- Options of various inserts for rough boring of different materials and boring styles.
- Available is the horizontal slide made of Aluminum alloy to reduce total weight.
- Options of external boring kit with boring range from Ø20mm to Ø300mm.

Precision Finish Boring Head Sets

NEW



1 SCALE 0.002 MM

- Processing range Ød 6-90mm.
- This slim set allows customer to process boring work in the narrow space with high precision.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.
- Please keep boring head clean and lubricate constantly.

SET TYPE

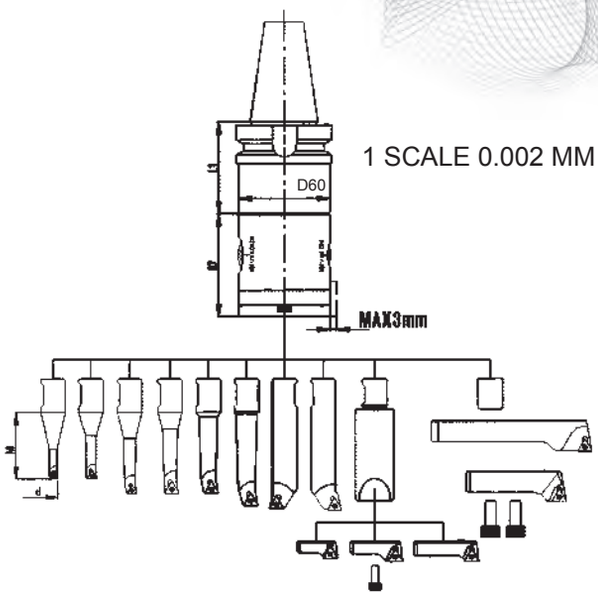
ORDER NO.	Boring Range Ø	Shank	L1	Head Dia. ØD	PCS/SET	CODE NO.
VBHD-BT-30	6-90	BT30-VCK4-45	45	48	14 PCS/SET	3320-450
VBHD-BT-40		BT40-VCK4-60	60			3320-451
VBHD-BT-50		BT50-VCK4-75	75			3320-452
VBHD-SK-40		SK40-VCK4-65	65			3320-453
VBHD-SK-50		SK50-VCK4-75	75			3320-454
VBHD-NT-40		NT40-40-VCK4-60	60			3320-455
VBHD-NT-50		NT50-50-VCK4-60	60			3320-456
VBHD-HSK63A		HSK63A-VCK4-75	75			3320-457
VBHD-HSK100A		HSK100A-VCK4-75	75			3320-458

ACCESSORIES: BORING BAR SIZE FOR SET TYPE

Boring Bar	Range d	Depth m	Insert	Screw	Wrench	Feed mm/REV.
BR-1606-20	6-9	20	WBGT060102L	TS2	T6	0.05-0.1
BR-1608-28	8-11	28	TBGT060102L			0.05-0.1
BR-1610-36	10-13	36	TBGT060104L			0.07-0.15
BR-1612-42	12-15	42	TPGT090202L	TS25	T8	0.05-0.1
BR-1614-50	14-17	50				
BR-1616-60	16-20	60				
BR-1620-63	20-24	63	TPGT090204L			0.07-0.15
BR-1624-64	24-28	64				
BM5		60+SRTP2838/SRTP3652/SRTP4470		M5 X15 CAP	4	0.05-0.1
SRTP2838	28-38	+10	TPGT090202L	TS25	T8	
SRTP3652	36-52	+12				
SRTP4470	44-70	+12	TPGT090204L			0.07-0.15
BM8				M5 X 15 CAP	6	
SRTP58-90	58-90	+20	TPGT090204L	TS25	T8	

Precision Finish Boring Head Sets

NEW



1 SCALE 0.002 MM

- Processing range Ød 6-150mm.
- This slim set allows customer to process boring work in the narrow space with high precision.
- Please keep boring head clean and lubricate constantly.
- Precisely ground and hardened shank integrating with boring head for routing and smooth operation.

SET TYPE

ORDER NO.	Boring Range Ø	Shank	L1	Head Dia. ØD	PCS/SET	CODE NO.
VBHE-BT-40	6-150	BT40-VCK5-60	60	60	15 PCS/SET	3320-460
VBHE-BT-50		BT50-VCK5-75	75			3320-461
VBHE-SK-40		SK40-VCK5-65	65			3320-462
VBHE-SK-50		SK50-VCK5-75	75			3320-463
VBHE-NT-40		NT40-40-VCK5-60	60			3320-464
VBHE-NT-50		NT50-50-VCK5-75	75			3320-465
VBHE-HSK63A		HSK63A-VCK5-75	75			3320-466
VBHE-HSK100A		HSK100A-VCK5-75	75			3320-467

ACCESSORIES: BORING BAR SIZE FOR SET TYPE

Boring Bar	Range d	Depth m	Insert	Screw	Wrench	Feed mm/REV.
BR-1606-20	6-9	20	WBGT060102L	TS2	T6	0.05-0.1
BR-1608-28	8-11	28	TBGT060102L			0.05-0.1
BR-1610-36	10-13	36	TBGT060104L			0.07-0.15
BR-1612-42	12-15	42	TPGT090202L	TS25	T8	0.05-0.1
BR-1614-50	14-17	50				
BR-1616-60	16-20	60				
BR-1620-63	20-24	63	TPGT090204L			0.07-0.15
BR-1624-64	24-28	64				
BM5		60+SRTP2838/SRTP3652/SRTP4470		M5 X15 CAP	4	0.05-0.1
SRTP2838	28-38	+10	TPGT090202L	TS25	T8	
SRTP3652	36-52	+12				
SRTP4470	44-70	+12	TPGT090204L			0.07-0.15
BM8				M5 X 15 CAP	6	
SRTP70100	70-110	+20	TPGT090202L	TS25	T8	0.05-0.1
SRTP110150	110-150	+20	TPGT090204L			0.07-0.15

High Precision Boring Head Set

NEW

1 SCALE 0.005mm
BORING CAPACITY Ø8-Ø46

VBH 620

- Good for high speed, high precision boring work.
- Made of tool steel, high rigidity, no deformation.
- Each dividing scale is 0.005 mm, total stroke: 6mm.
- Can choose any taper (BT40, BT50, SK40, SK50) shank.
- Include 8 boring bars, range Ø8 ~ Ø46 mm.

- Boring bar size = Ø16 x 8 pcs
- Insert locking screw 8 x 3 = 24 pcs
- Wrench x 6 pcs
- 4 mm T wrench x 1 pcs

SET TYPE

ORDER NO.	SHANK TYPE	DRAWBAR S.A.E	THREAD METRIC	Weight (kgs)	CODE NO.
VBH620-NT40	NT-40	5/8″-11W	M16X2.0P	6.5	3320-480
VBH620-NT50	NT-50	1″-8W	M24X3.0P	7.8	3320-481
VBH620-BT40	BT-40		M16X2.0P	6.5	3320-482
VBH620-BT50	BT-50		M24X3.0P	8	3320-483
VBH620-SK40	SK-40		M16X2.0P	6.5	3320-484
VBH620-SK50	SK-50		M24X3.0P	7.8	3320-485

BORING BAR FOR BORING HEAD

BORING BAR	RANGE d	DEPTH m	SHANK L	INSERT	SCREW	WRENCH
1608-32	8-11	32	80	TBGT060102L	SB-1STR-M2	T6
1610-40	10-13	40	87			
1612-53	12-15	53	98	TPGH090204L	SB-2STR-M2.5	T8
1616-68	16-21	68	110			
1620-83	20-26	83	124	TPGH110304L	SB-3STR-M3	T10
1625-90	25-31	90	128			
1630-90	30-36	90	128			
1640-90	40-46	90	128			

High Precision Boring Head Set

NEW

1 SCALE 0.005mm
BORING CAPACITY Ø8-Ø280

VBH 2084

- Good for high speed, high precision boring work.
- Made of tool steel, high rigidity, no deformation.
- Each dividing scale is 0.005 mm, total stroke: 27mm.
- Can choose any taper (BT40, BT50, SK40, SK50) shank.
- Include 8 boring bars, range Ø8 ~ Ø280 mm.

- Boring bar size = Ø20 x 8 pcs
- Insert locking screw 8 x 3 = 24 pcs
- Wrench x 6 pcs
- Hexa 6 wrench x 1 pcs

SET TYPE

ORDER NO.	SHANK TYPE	DRAWBAR S.A.E	THREAD METRIC	Weight (kgs)	CODE NO.
VBH2084-R8	R-8	7/16″-20UNF	n/a	6.6	3320-491
VBH2084-NT30	NT-30	1/2″-12W	M12X1.75P	6.6	3320-492
VBH2084-NT40	NT-40	5/8″-11W	M16X2.0P	7	3320-493
VBH2084-NT50	NT-50	1″-8W	M24X3.0P	9	3320-494
VBH2084-BT40	BT-40		M16X2.0P	8	3320-495
VBH2084-BT50	BT-50		M24X3.0P	10.4	3320-496
VBH2084-SK40	SK-40		M16X2.0P	8	3320-497
VBH2084-MT3	MT-3		M12X1.5P	6.6	3320-498
VBH2084-MT4	MT-4		M16X2.0P	7	3320-499
VBH2084-MT5	MT-5		M24X3.0P	8	3320-500

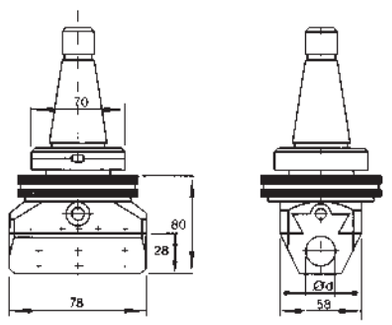
BORING BAR FOR BORING HEAD

BORING BAR	RANGE d	DEPTH m	SHANK L	INSERT	SCREW	WRENCH
2008-32	8-11	32	75	TBGT060102L	SB-1STR-M2	T6
2010-40	10-13	40	75			
2012-53	12-17	53	85	TPGH090204L	SB-2STR-M2.5	T8
2016-68	16-21	68	100			
2020-83	20-130	83	115	TPGH110304L	SB-3STR-M3	T10
2025-95	25-135	95	128			
2030-115	30-140	115	147			
2020-L	120-280	85+BT	98			

Universal Boring And Facing Master Head

BORING CAPACITY Ø5-Ø250 **1 SCALE 0.01mm**

ORDER NO.	SHANK TYPE	DRAWBAR THREAD		Weight (kg)	CODE NO.
		S.A.E	METRIC		
VBHU-202	MT-3	1/2″-12W	M12X1.5P	6/6.1	3401-001
VBHU-203	MT-4	5/8″-11W	M16X2.0P	6.3/6.3	3401-002
VBHU-204	MT-5	1″-8W	M24X3.0P	7.1/7	3401-003
VBHU-205	R-8	7/16″-”20UNF	n/a	6.2/	3401-004
VBHU-206	NT-30	1/2″-12W	M12X1.75P	6/6	3401-005
VBHU-207	NT-40	5/8″-11W	M16X2.0P	6.3/6.2	3401-006
VBHU-208	NT-50	1″-8W	M24X3.0P	8.9/8.5	3401-007
VBHU-209	BT-40		M16X2.0P	/6.9	3401-008
VBHU-210	C-25			4.5	3401-009
VBHU-211	SK-40		M16X2.0P	5.6	3401-010
VBHU-212	SK-50		M24X3.0P	8.3	3401-011
VBHU-213	BT-50		M24X3.0P	9.7/9.7	3401-012

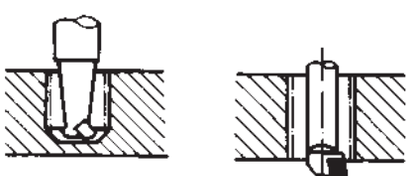


SPECIFICATION

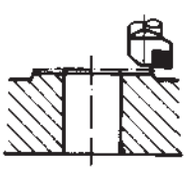
Unit:mm

ACTUAL SIZE	OVERING BAR HOLE SIZE	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET
78	100	18	23	18	15

It is construction with precision parts, freedom of selection feeding quantity, auto feed and stop. Processing range from 5mm to 250mm.

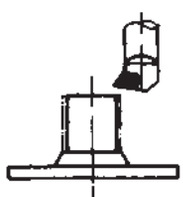


Boring with several different bits from 5Ø -250mm

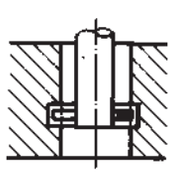


From inside outward

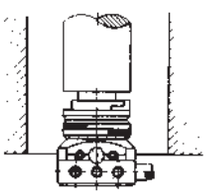
From inside inward



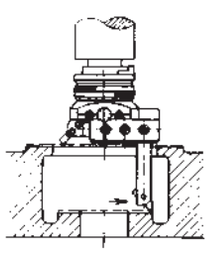
Outside turning



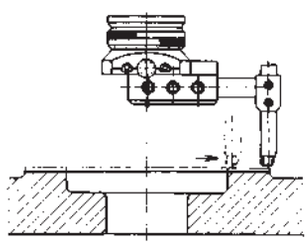
Recessing



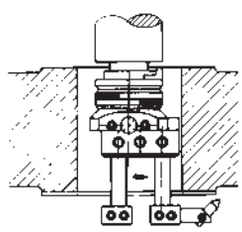
Because of the small construction of the facing and boring heads deep bores can be made. In this case the boring bit is fixed directly in the side.



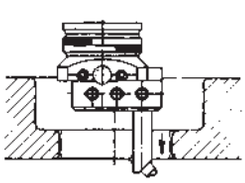
Facing in two areas with one boringbar and boringbar holder



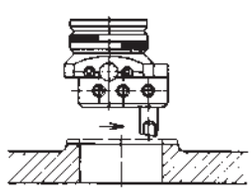
Facing of large ø with long bor ingbar holden reinforced by rings and draw in screw



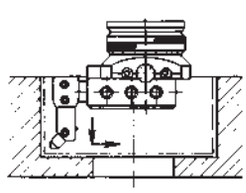
Facing of the reverse side by using boringbar holders contained in attachment.



Boring with long boringbar

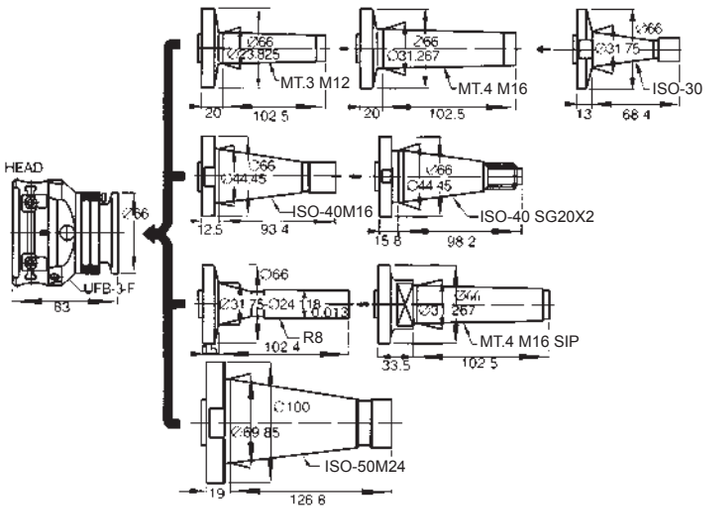


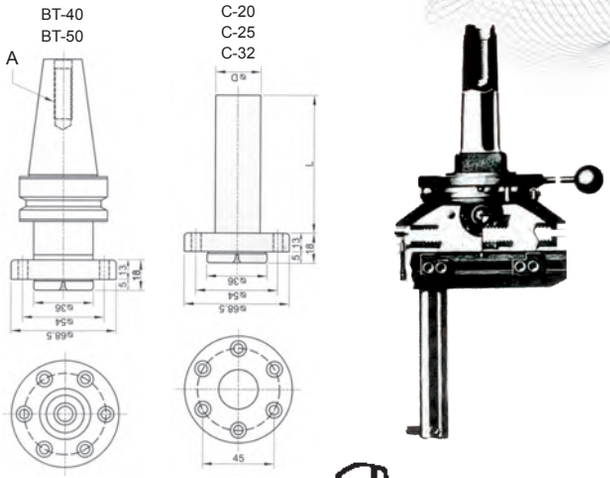
Facing with bit fixed directly in slide

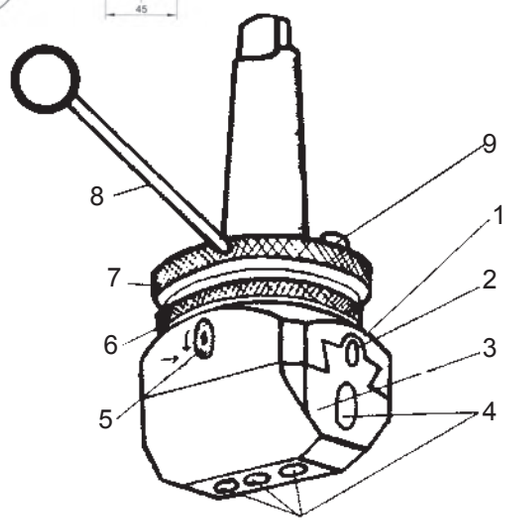


Boring and facing with short boringbar holder and a bor ingbar

SHANK







Main part of the universal boring heads is the body(1), in which the tool slide (3) moves on dovetail guideways. The tool slide is provided with holes for accommodation of tools and tool holders(4). In boring holes or turning extenal cylindrical surfaces, the tool is adjusted with the aid of the graduated dial for fine setting of tool slide(5), one division of which means a change in diameter of bored hole by .0005″.

On the types rapid adjustment of the tool slide(3) can be produced by rotating the graduated dial for quick adjustment of the tool slide(2).

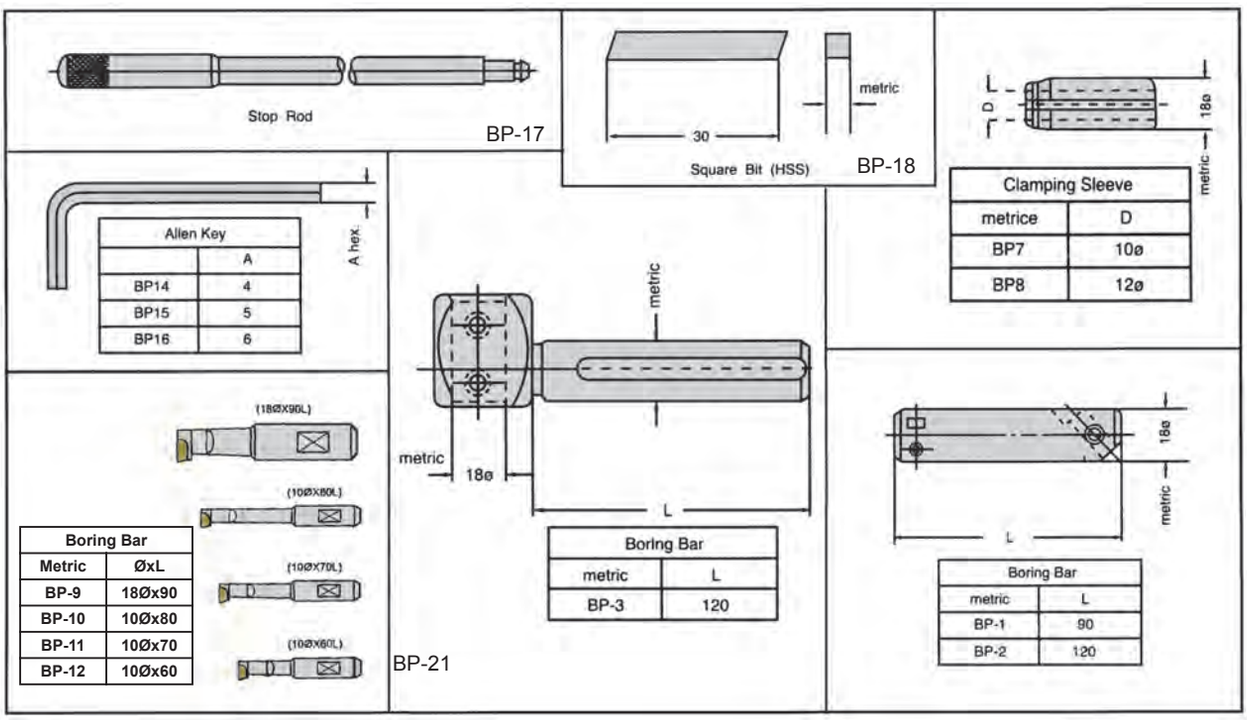
During recessing, turning of front or rear facings or similar jobs calling for automatic transverse feed movement to the tool slide, the preselected feed movement to the tool slide is engaged with the aid of the engagement ring (6). After setting of tool, the automatic transverse feed movement to the tool slide is started by braking of the brake ring(7), by means of the handle(8).

The cluth(9) provides for tripping of the automatic feed movement when cutting resistance increases or when the trip dog is approached.

Mechanism of the boring heads has a lubrication circuit delivering oil from two lubricators to all friction surfaces.

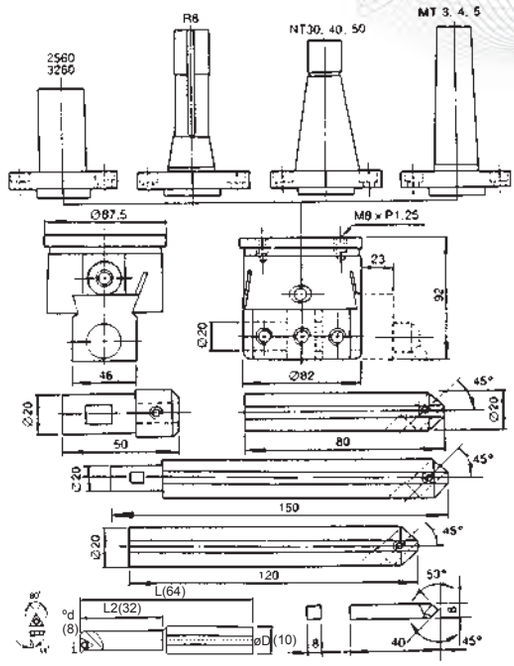
All parts are hardened and working surfaces are ground.

SHANK FOR VBHU-		
MT-3	MT-4	MT-5
NT-30	NT-40	NT-50
R-8		
C-20	C25	C-32
	BT-40	BT-50



Boring Head Sets

STANDARD TYPE



INSERT NO.
TBGT060102L-W-T1200A FOR STEEL
TBGT060102L-W-G11 FOR CASTING
"SUMITOMO" BRAND

1 SCALE 0.01mm

Processing Range ø10 ~ ø240mm

Simple, extremely rigid construction, Finest materials and craftsmanship are employed to combine strength, flexibillity and accuracy in a tool of unique design. 2 vertical boring tool holes: one centered and one offset. One cross hole for greater versatility and capacity. Dependable adjustment --- far spread graduation for closer reading. Perfectly balanced for high speed operation.
Precision ground & hardened shank are integrating with the head for routing and smoother operation.

FULL SET

ORDER NO.	SHANK TYPE	DRAWBAR THREAD		Weight (kgs)	CODE NO.
		S.A.E	METRIC		
VBH-102	MT-3		M12X1.75P	5.9	3401-101
VBH-103	MT-4		M16X2.0P	6.1	3401-102
VBH-104	MT-5		M20X3.0P	7	3401-103
VBH-105	R-8	7/16" ~20UNF		5.9	3401-104
VBH-106	NT-30	1/2"-12W or 1/2"-13W	M12X1.75P	5.8	3401-105
VBH-107	NT-40	5/8"-11W	M16X2.0P	6	3401-106
VBH-108	NT-50	1"-8W	M24X3.0P	8.9	3401-107
VBH-109	BT-40	-	M16X2.0P	7.1	3401-108
VBH-110	SK-40	-	M16X2.0P	6.8	3401-109
VBH-111	C-25	-	-	5.9	3401-110
VBH-112	BT-50		M24X3.0P		3401-111

SHANK FOR BORING HEAD

ORDER NO.	VBH-MT3	VBH-MT4	VBH-MT5	VBH-R8
WEIGHT (KG)	0.6	1.2	2.1	1
CODE NO.	3401-120	3401-121	3401-122	3401-123

ORDER NO.	VBH-NT30	VBH-NT40	VBH-NT50	VBH-BT40
WEIGHT (KG)	1.1	1.2	3.9	1.9
CODE NO.	3401-124	3401-125	3401-126	3401-127

ORDER NO.	VBH-SK40	VBH-C25	VBH-BT50	
WEIGHT (KG)	1.9	1.5	3.1	
CODE NO.	3401-128	3401-129	3401-130	

Boring Head Set C-Type

1 SCALE 0.01mm

VBHC-BC2
SET TYPE

MAX. BORING DEPTH 50mm

Here is a sturdy unit of extended boring range, capable of peeling off heavy roughing cuts as well as a tool of extreme sensitivity.
The use of a wide base bar holder, resting securely on the body, eliminates the need for a separate side plate. You will note this has now become an integral part of the body.
The direct reading adjusting screw is ground affer hardening and a plainly marked dial face in nonreflecting satin chrome allows easy reading and adjustments of 0.01 or less.
All Criterion Boring Heads have threaded backs for use with a variety of shanks. This model takes a 1-1/2"-18 threaded shank.
SHANK SIZE: NT-30,40,50, MT-3,4,5,R8

BORING CAPACITY Ø10~Ø110

ORDER NO.	WEIGHT (kgs)	CODE NO.
VBHC-R-8-BC-2	2	3401-150
VBHC-MT-3-BC-2	1.9	3401-151
VBHC-MT-4-BC-2	2.1	3401-152
VBHC-NT-30-BC-2	2.2	3401-153
VBHC-NT-40-BC-2	2.8	3401-154
VBHC-BT-30-BC2		3401-155
VBHC-BT-40-BC2	2.65	3401-156
VBHC-BT-50-BC2	5.65	3401-157

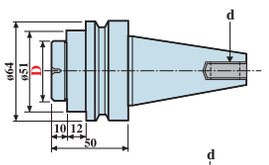
BORING CAPACITY Ø10~Ø220

ORDER NO.	WEIGHT (kgs)	CODE NO.
VBHC-R-8-BC-3	4.2	3401-160
VBHC-MT-3-BC-3	4	3401-161
VBHC-MT-4-BC-3	4.3	3401-162
VBHC-NT-30-BC-3	4.1	3401-163
VBHC-NT-40-BC-3	4.7	3401-164
VBHC-NT-50-BC-3	6.9	3401-165
VBHC-BT-30-BC-3		3401-166
VBHC-BT-40-BC-3	4.7	3401-167
VBHC-BT-50-BC-3	7.7	3401-168

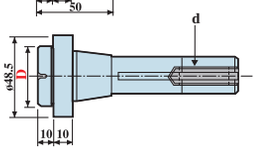
VBHC-BC3 SET TYPE

Boring Head Shank C-Type

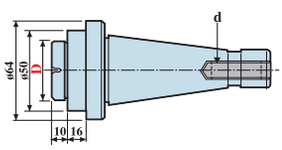
D: 1 1/2″-18UNC



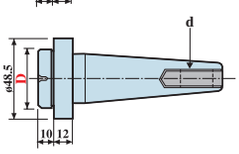
BT-40, 50



R-8



NT-30 M12x1.75P 1/2″-12UNC
NT-40 M16x2.0P 5/8″-11UNC
NT-50 M24x3.0P 1″-8UNC

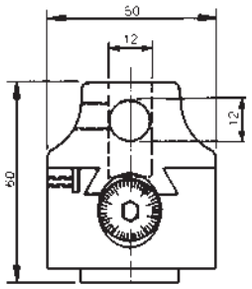


MT-3 M12x1.75P 3/8″-16UNC
MT-4 M16x2.0P 5/8″-11UNC
MT-5 M24x3.0P 1″-8UNC

The shanks are made tor for C-type boring head use.
Also it can be replaced from time to time.

ORDER NO.	VBC-R8	VBC-NT30	VBC-NT40	VBC-MT3	VBC-MT4	VBC-MT5	VBC-BT40	VBC-BT50
WEIGHT (KG)	0.4	0.7	1.3	0.6	0.9	1.6	1.4	
CODE NO.	3401-210	3401-211	340-212	3401-213	3401-214	3401-215	3401-216	3401-217

C-Type Boring Head



Here is a small head that will be in constant demand in any shop.
Note the wide base bearing surface that assures maximum rigidity even when the bar holder is in an off-set position. This wide base design is a recent Criterion innovation that increases bearing surfaces by 50% over the older models.

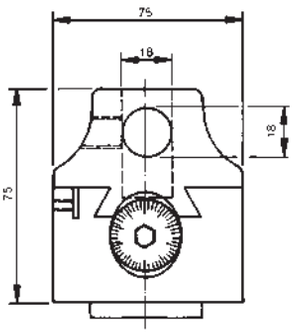
A choice of either 3/8″ or 1/2″ double hole bar holder with a 1/2″ cross hole is available.
The unit has a 7/8″-20NC threaded back and also features a direct reading dial screw.

ORDER NO. VBC-2

SPECIFICATION

BORING CAPACITY Ø10-Ø100

ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-2(m)	50	62	12	15	12	15	0.8	3401-302



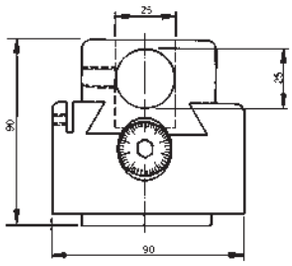
Here is a sturdy unit of extended boring range, capable of peeling off heavy roughing cuts as well tool of extreme sensitivity. The use of a wide-base bar-holder resting securely on the body, eliminates the need for a separate side plate. You will notice it has now become an integral part of the body.
The direct reading adjusting screw is ground after hardening and a plainly marked dial face in non-reflecting satin chrome allows easy reading and adjustmens of. 0005 or less.
All Criterion Boring Heads have threaded backs for use with a variety of shanks. This model takes a 1-1/2″-18 threaded shank.

ORDER NO. VBC-3

SPECIFICATION

BORING CAPACITY Ø10-Ø220

ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-3(m)	75	80	18	23	18	25	2	3401-304



This is a bigger boring head which can be put on alarge machine to process more as you want. The radius of boring hole can reach on about ø 400mm long by a boring bar of 160mm.

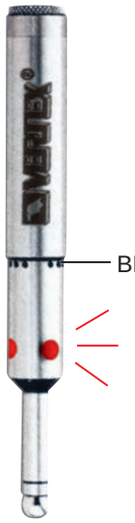
SPECIFICATION

BORING CAPACITY Ø10-Ø250

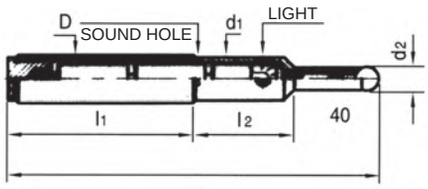
ORDER NO.	ACTUAL SIZE	OVERALL LENGTH	BORING BAR HOLE SIZE	CENTER DIST BETWEEN HOLES.	CROSS HOLE DIA	OFFSET	WEIGHT (kg)	CODE NO.
VBC-4(m)	100	90	25	32	25	25	4	3401-306

Touch Point Sensor

With beeper



- No need to rotate while measuring.
- The red light was sealed with setting red-glue; it can concentrate the light and resist water.
- The sensor beeps while the red light is on.
- The sensor will beep when the user couldn't see the reverse side or get a clear sight.
- Example. If sensor's light is working, visually you couldn't see inside of the inner hole, while probing the user can be warned by the beeper.
- When probe the deep hole, you can't see the red light, but you can hear the sound from beeper.
- Accuracy: within 0.005mm.



OPTICAL TYPE WITH BEEPER

Unit:mm

ORDER NO.	D	d1	d2	L	l1	l2	BATTERY TYPE	WEIGHT (kg)	CODE NO.
VPS-20B	Ø20	18	10	160	79	41	UM-5#(SP) x1PCS/12V	0.4	3402-001
VPS-32B	Ø32	18	10	160	79	41		0.7	3402-002

Touch Point Sensor

Optical Type

VPS-20

VPS-32

- High sensitivity position sensor.
- Red pilot can be seen clearly.
- Whole travel of red pilot is sparkling, detecting also can be done during turning while spindle stops.
- Location of end surface, outter circle dia.,inner circle dia. of the workpiece for processing can be detected with full effect.
- Deviced with safety line excess, ball supported by spring, so even line excess, it will be separtated easily from the base shown as the fig.
- The precision will reach up to micrometer while the ball returns to center position.

OPTICAL TYPE

Unit:mm

ORDER NO.	D	d1	d2	L	l1	l2	BATTERY TYPE	WEIGHT (kg)	CODE NO.
VPS-20	20	16	10	157	77	35	UM-5#(SP) x2P/R1./1.5V	0.4	3402-003
VPS-32	32	16	10	157	71	41		0.7	3402-004

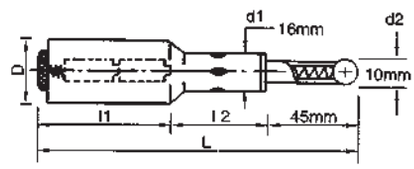
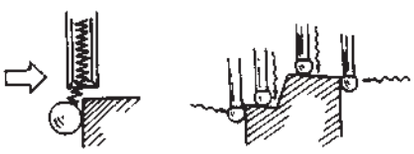
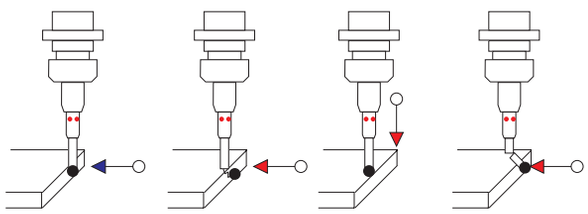


Fig.





Touch Point Sensor

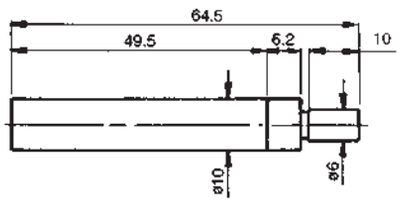
VPS-201

CREAMIC TYPE VPS-201C

This series is a high precision setting device for positioning the accurate center between tool spindle of machine and reference surface of working at low-cost and saving time.
Accuracy : within 0.005 mm
Made of tool steel, hardened and ground.
Suitable rotation speed : VPS-201 450 to 600rpm.
VPS-401 600 to 1,000 rpm

MECHANICAL TYPE
SIMPLE TYPE

ORDER NO.	VPS-201	VPS-201C
WEIGHT (KG)	0.03	0.06
CODE NO.	3402-005	3402-007



Touch Point Sensor

Deluxe Type

VPS-401

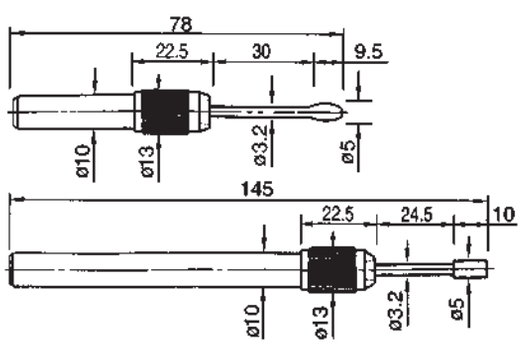
VPS-401C

FEATURES:

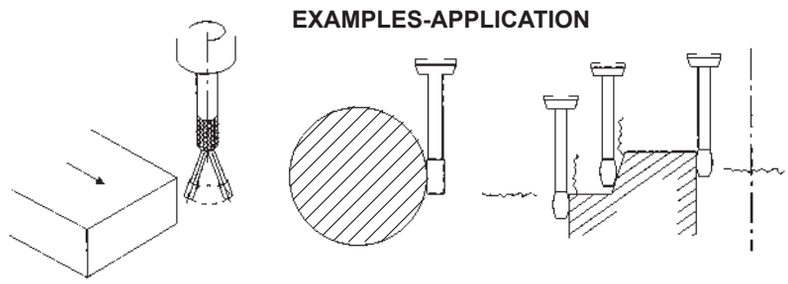
- Material: high-carbon steel.
- Accuracy: within 0.003mm
- Hardness: HRC 58˚± 1˚
- R.P.M. Within 600-1000
- Suitable for milling machine.
  Drill machine and boring machine.

VPS-401 (2 PCS/SET)
VPS-402A(LONG) SINGLE
VPS-402B(SHORT) SINGLE

ORDER NO.	VPS-401	VPS-401C
PCS/SET	2PCS/SET	2PCS/SET
WEIGHT (KG)	0.26	0.26
CODE NO.	3402-006	3402-008



EXAMPLES-APPLICATION



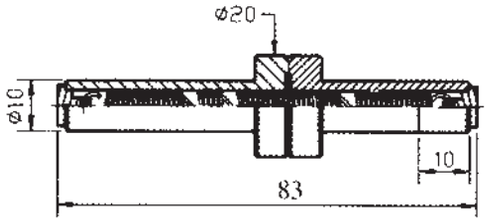
Touch Point Sensor

MECHANICAL TYPE

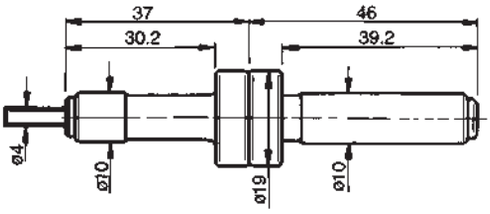
VPS-301

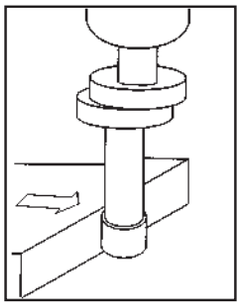
CERAMIC TYPE VPS-301C

VPS-302

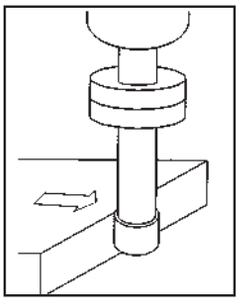


- Accuracy of zero point to point is within 0.003mm
- R.P.M. within 450-600.
- Max. flange can be clear your sight sense.
- MIN.(4mm) can be test mini hole for your workpiece.

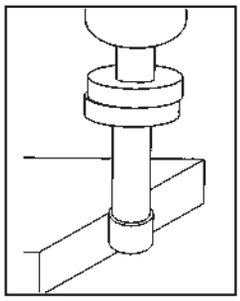




Spindle runs about 500rpm. move spindle closed to measuring surface.



When measuring probe touches workpiece, it looks in one part.



When the probe and shank are in alignment, probe will slide out of rotating center. Now,the center spindle is located 5mm away from measuring surface

ORDER NO.	MATERIAL	HARDNESS	WEIGHT (kg)	CODE NO.
VPS-301	ALLOY STEEL	HRC 56˚	0.06	3402-100
VPS-302			0.05	3402-101
VPS-301S	STAINLESS	HRC 60˚	0.06	3402-102
VPS-302S			0.06	3402-103
VPS-301C	CERAMIC	HRC 60˚	0.06	3402-104

Centering Indicator

ORDER NO.VCI-170 CODE NO.3402-130

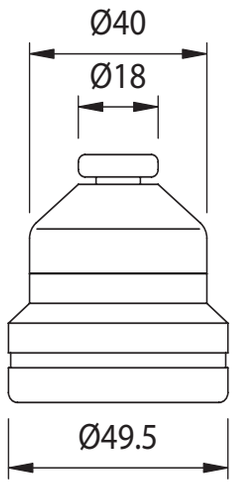
(WITH STOP BAR FOR FIXING THE HEAD)

- RPM Within 800.
- Use for Internal or External.
- Use for Vertical or Horizontal.
- While Spindle Rotates,With Stop bar for Fixing The Head The Centering Indicator Always faces the operator.

Shank	ø10	m/m
Length	170	m/m
Internal	ø4~ø108	m/m
External	ø0~ø108	m/m
Min. Indicator	0.01	m/m
Indicator Range	0~6	m/m
Weight	0.8 kgs	

Height Presetter

OPTICAL TYPE



HP-50Z BATTERY
LR4476AG13
1SET/2PCS
HP-50ZM
LR44
1SET/2PCS

- Height 50mm.
- With Magnetic base.
- The red lamp will be lighted up when touched.
- Accuracy 0.005mm.
- Combined vertical and horizontal in a unit.
- Weight:0.7kgs

	STANDARD TYPE	WITH MAGNETIC BASE
ORDER NO.	HP-50Z	HP-50ZM
CODE NO.	3403-001	3403-002

Height Presetter (For Machining Center)

ORDER NO.HP-100 CODE NO.3403-010

- Locate the height presetter on a place suitable for a reference surface of work piece.
- Apply the cutter on the measuring surface and slowly lower the Z-axis. Then, cutter gets near to the measuring position.
- A distance from the reference surface to the tool tip can be measured easily and precisely so that this presetter is most suitable not only for machineing centers but for NC lathes and NC milling machines.

* Magnetic base function can be used in vertical position & horizontal position.
* HEIGHT:100mm±0.005

Height from reference surface	WEIGHT(kgs)
100mm	2.6

Z-Zero-Setter

HP-50A

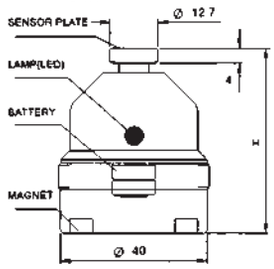
HP-50B

- Have the central measuring part of the zero setter presetter against a plain surface and aligned if with the outer reference surface. Turn the dial gauge for zero setting.
- Have the cutter touched against the z zero setter. Once the indicator position at zero, the distance between the tool tip to workpiece is 50mm.

ORDER NO.	H	STYLE	WEIGHT (kg)	CODE NO.
HP-50A	50mm	STANDARD TYPE	1.1	3403-020
HP-50B			1.7	3403-021
HP-50AM		WITH MAGNETIC BASE	1.2	3403-022
HP-50BM			1.7	3403-023

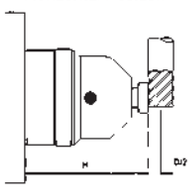
Electronic Tool Length Setter

Basic Dimension

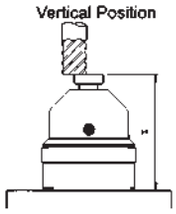


Stainless Steel Base With Magnet

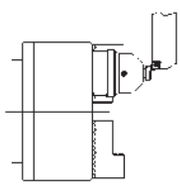
Horizontal Position



Vertical Position



CNC Lathe



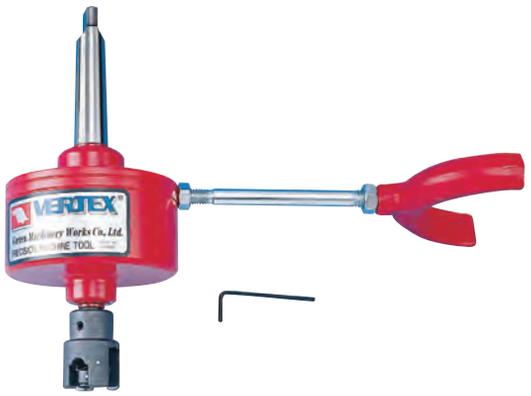
- **HIGH ACCURACY**
- **EASY OPERATION**
- Be sure to remove all chips and all from the sensor plate and the base of the HP-50E as well as from the workpiece and tool.
- To move the tool approaching the sensor plate slowly.
- When touching, the “LED” turns on immediately and “H” is just 50.00 mm.(or2″)
- LED will not function if batteries are not set in correctly.
- Designed to be used on ferrous and non-ferrous materials.

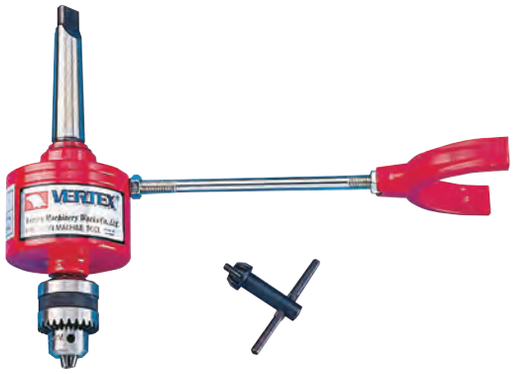
ORDER NO.	H	STYLE	WEIGHT (kg)	CODE NO.
HP-50EM	50mm	WITH MAGNETIC BASE	0.3	3403-032
HP-100EM	100mm		1.2	3403-033

Stainless Steel Base With Magnet

TOOL PRE-SETTER FOR MACHINING CENTERS. CNC & STANDARD MILLING MACHINES AND CNC & STANDARD LATHES

Reversible Tapping Attachment for Drilling & Milling Machine





ORDER NO.	TAPPING CAPACITY	SHANK	TO WORK WITH DRILLING MACHINE	WEIGHT (KG)	PACKING mm	SPEED	CODE NO.
K1-1/2	Ø3-8mm	1/2″	DRILLING MACHINE MUST EQUIPPED WITH DRILL CHUCK CAPACITY 13M/M	0.8	90X90X190	1 : 1	3404-001
K1-MT-2	Ø3-8mm	MT-2	DRILLING MACHINE MUST EQUIPPED WITH MT-2 HOLE	1	90X90X240	1 : 1	3404-002
K2-1/2	Ø5-10mm	1/2″	DRILLING MACHINE MUST EQUIPPED WITH DRILL CHUCK CAPACITY 13M/M	1.5	100X100X210	1 : 1	3404-003
K2-MT-2	Ø5-10mm	MT-2	DRILLING MACHINE MUST EQUIPPED WITH MT2 HOLE	1.6	100X100X260	1 : 1	3404-004
K3-MT-3	Ø6-14mm	MT-3	OTHERS LIKE MT-3 SHANK BORING HOLE DRILLING MACHINE N.T. AVAILABLE	3.1	125X125X300	1 : 1	3404-005
K4-MT-3	Ø12-25mm	MT-3	OTHERS LIKE MT-3 SHANK BORING HOLE DRILLING MACHINE N.T. AVAILABLE	5.4	160X160X360	1 : 1	3404-006

K1 TYPE USED CHUCK TO FIX THE TAP
K2, K3, K4 TYPE USED THE SLIDING PLATE OF THE SQUARE SHARP HOLE TO FIX THE TAP.

Tap Chuck Series

VTA13-3
MT2

VTA13-1
JT6

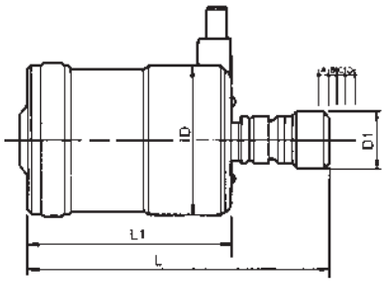
- THE DESIGN CAN PREVENT THE TAPS CHUCK FROM LOOSENING AFTER TAPPING.
- SUIT FOR VARIOUS TAPS. LARGE TAPPING CAPACITY. HIGH POWER TORSION.

ORDER NO.	CONNECTING TAPER	TAPPING CAPABILITY	kgs	CODE NO.
VTA13-1	JT6	M3-M12 Ø1/8″ - Ø1/2″	0.9	3404-000
VTA13-2	B16		1.1	3404-007
VTA13-3	MT2		0.8	3404-008
VTA16-1	JT3	M9-M18 Ø3/8″ - Ø3/4″		3404-016
VTA16-2	B18		1.3	3404-017
VTA16-3	MT2		1.2	3404-018
VTA16-4	MT3		1.3	3404-019

TAP CHUCK WRENCH

Extra Purchase Welcome.

Reversible Tapping Attachments



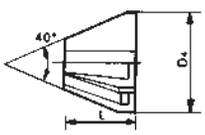
- Radial Float is SELFCENTERING to compensate for hole center misalignment.
- Unique Double Spring Mechanism produces Automatic Feed and Cushion Drive. There are two springs for the feed and two springs for the reversal. Each set gives you double smoothness for ULTRA accurate tapping applications(not possible with this type of tapping head in the past).
- Pre-set Torque Control Permits easy operation of tap brake torque control
- JACOBS RUBBER FLEX COLLETS are standard accessory.

Reversing Type

ATTACHMENT DESIGNATIONS ORDER NO.	FOR TAPS	SUITABLE ADAPTERS SIZE	REC.MAX SPEED	LENGTH COMPENSATION R.H.ROTATION NON ROTAT LH.ROTAT.				D DIA	D1 DIA	L	L1	WEIGHT (kgs)	CODE NO.
				COMP A	EXP. B	EXP. C	EXP. E						
VTA7-JT6	M2-M7	FC-10/FC-11	1500RPM	5	3.5	1.5	7.0	52	23	125.5	94.5	1.3	3404-020
VTA12-JT6	M3-M12	FC-20/FC-21	1000RPM	5	4.5	1.5	8.5	73.5	28	169	122	3.1	3404-021
VTA20-M20	M8-M20	FC-30/FC-31	600RPM	5.5	5	2.0	9.0	91	38	190	128	5.7	3404-022

Rubber Flex Collet For VTA Tapper

ORDER NO.	COLLETS CAPACITY	D4	L	CODE NO.
FC-10	Ø 2.5 - Ø 4.5	16	11	3404-030
FC-11	Ø 4.5 - Ø 6.5	16	11	3404-031
FC-20	Ø 4 - Ø 7	21.5	13	3404-032
FC-21	Ø 7.5 - Ø 10	21.5	13	3404-033
FC-30	Ø 8.0 - Ø 16	26.5	15	3404-034
FC-31	Ø 14 - Ø 19	26.5	15	3404-035



CONNECTING ARBOR FOR VTA20-M20	
MT3-M20	3404-036A
MT4-M20	3404-037A

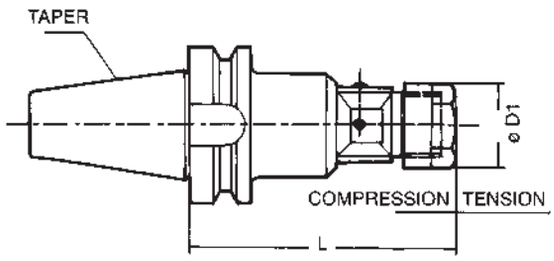
Tap Chuck

- It's suitable for various taps, so it is much more economic and efficient than other brands of taps chuck.
- The design can prevent the taps chuck from loosening after tapping.

Unit:mm

ORDER NO.	SIZE	TAPPING CAPACITY		Taper Mount NO. DIN or Jacobs	Length (m/m)	Outer Dia. (m/m)	Weight (g)	CODE NO.
		mm	inch					
VTA-35000	1/2	M4-M12	1/8-1/2	JT6	75	42	850	3404-056
VTA-35002	1/2	M4-M12	1/8-1/2	B16	75	42	585	3404-057

Expansible Tapping Holder

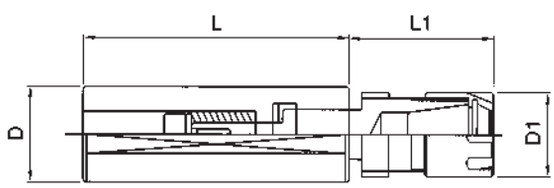


HOLDER-BT-TYPE

Unit:mm

ORDER NO.	COLLET	HOLDER (DXL)	L_1	D_1	TAPPING RANGE	WEIGHT (KGS)	CODE NO.
VET-271	ER20	BT40 20X110	110	34	M2-M16	2.2	3404-026
VET-272	ER20	BT50 20X95	95	34		4	3404-027
VET-273	ER32	BT40 32X110	110	50	M3-M25	2.4	3404-028
VET-274	ER32	BT50 32X110	110	50		4.5	3404-029

WITH SPANNER



HOLDER-MINI TYPE

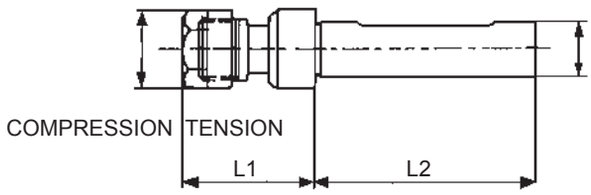
Unit:mm

ORDER NO.	COLLET	HOLDER (DXL)	L_1	D_1	TAPPING RANGE	WEIGHT (KG)	CODE NO.
VET-260	ER16	ER16M 20X70	35	22	M3-M10 1/8″-3/8″	0.2	3404-036
VET-261	ER16	ER16M 25X70	35	22		0.2	3404-037

Expansible Tapping Holder

- Floating and expansion design will reducte the differential of motor rotary speed and feeding speed so will extend the life of tap.
- Use ER High Spring Collet, you don't need to worry the few size will delay working, so their value is more than any other tapping system.
- Strong Vise clamping function which is controlled by one screw will keep the outlet which have been controlled by ER collet, so it can auto-center and you own the double lock and save in clamping.
- The series. can be fitted with ER20 collet as optional accessory.

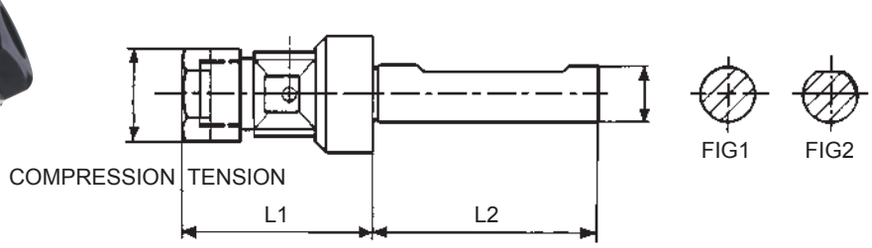
STRAIGHT SHANK



SINGLE HOLDER

Unit:mm

ORDER NO.	COLLET	HOLDER (D_2XL_2)	FIG	L_1	D_1	TAPPING RANGE	WEIGHT (KG)	CODE NO.
VET-102	ER16	20X80	2	47	28	(1/8″-3/8″)	0.4	3404-041



SINGLE HOLDER

Unit:mm

ORDER NO.	COLLET	HOLDER (D_2XL_2)	FIG	L_1	D_1	TAPPING RANGE	WEIGHT (KG)	CODE NO.
VET-202	ER20	20X80	2	70	34	M3-M16	1	3404-043
VET-252	ER20	25X80	2	70	34	(1/8-5/8″)	1.2	3404-044
VET-303	ER32	32X100		90	50	(M3-M25) (1/8-1″)	2	3404-045

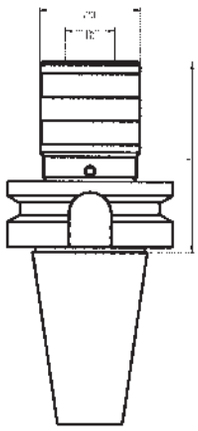
SETS TYPE

Unit:mm

ORDER NO.	COLLET	HOLDER (D_2XL_2)	SET/PCS	WEIGHT (KG)	CODE NO.
VET-105	ER16	20X80	8	1	3404-046
VET-106	ER16	20X80	10	1.1	3404-047
VET-253	ER20	20X80	10	1.6	3404-048
VET-254	ER20	20X80	12	1.7	3404-049

Quick Change Tapping Chucks

European Type



WITH LENGTH COMPENSATION

CHUCK SHANK

ORDER NO.	Thread Size	L	ØD1	ØD2	Length Compensation		Collets	CODE NO.
					Compression	Tension		
BT30-WF12	M3-M12	67	19	39	7.5	7.5	TC-312	3404-181
BT30-WF20	M8-M20	94	31	55	12.5	12.5	TC-820	3404-182
BT40-WF12	M3-M12	72	19	39	7.5	7.5	TC-312	3404-183
BT40-WF20	M8-M20	94	31	55	12.5	12.5	TC-820	3404-184
BT50-WF12	M3-M12	83	19	39	7.5	7.5	TC-312	3404-185
BT50-WF20	M8-M20	105	31	55	12.5	12.5	TC-820	3404-186

NEW

SET TYPE
SHANK WITH 7 PCS/SET OVERLOAD CLUTCH
TAPPING COLLET DIN, ISO & JIS SYSTEMS:
PLEASE SEE PAGE 100.

Collets Size	
TC-312	M3, M4, M5, M6, M8, M10, M12
TC-820	M8, M10, M12, M14, M16, M18, M20

SETS

ORDER NO.	SHANK Size	Thread Size	L	ØD1	ØD2	Length Compensation		Collets	PCS/ SET	CODE NO.
						Compression	Tension			
VQT-312	BT-30	M3-M12	67	19	39	7.5	7.5	TC-312	7PCS	3404-190
VQT-320	BT-30	M8-M20	94	31	55	12.5	12.5	TC-820	7PCS	3404-191
VQT-412	BT-40	M3-M12	72	19	39	7.5	7.5	TC-312	7PCS	3404-192
VQT-420	BT-40	M8-M20	94	31	55	12.5	12.5	TC-820	7PCS	3404-193
VQT-512	BT-50	M3-M12	83	19	39	7.5	7.5	TC-312	7PCS	3404-194
VQT-520	BT-50	M8-M20	105	31	55	12.5	12.5	TC-820	7PCS	3404-195

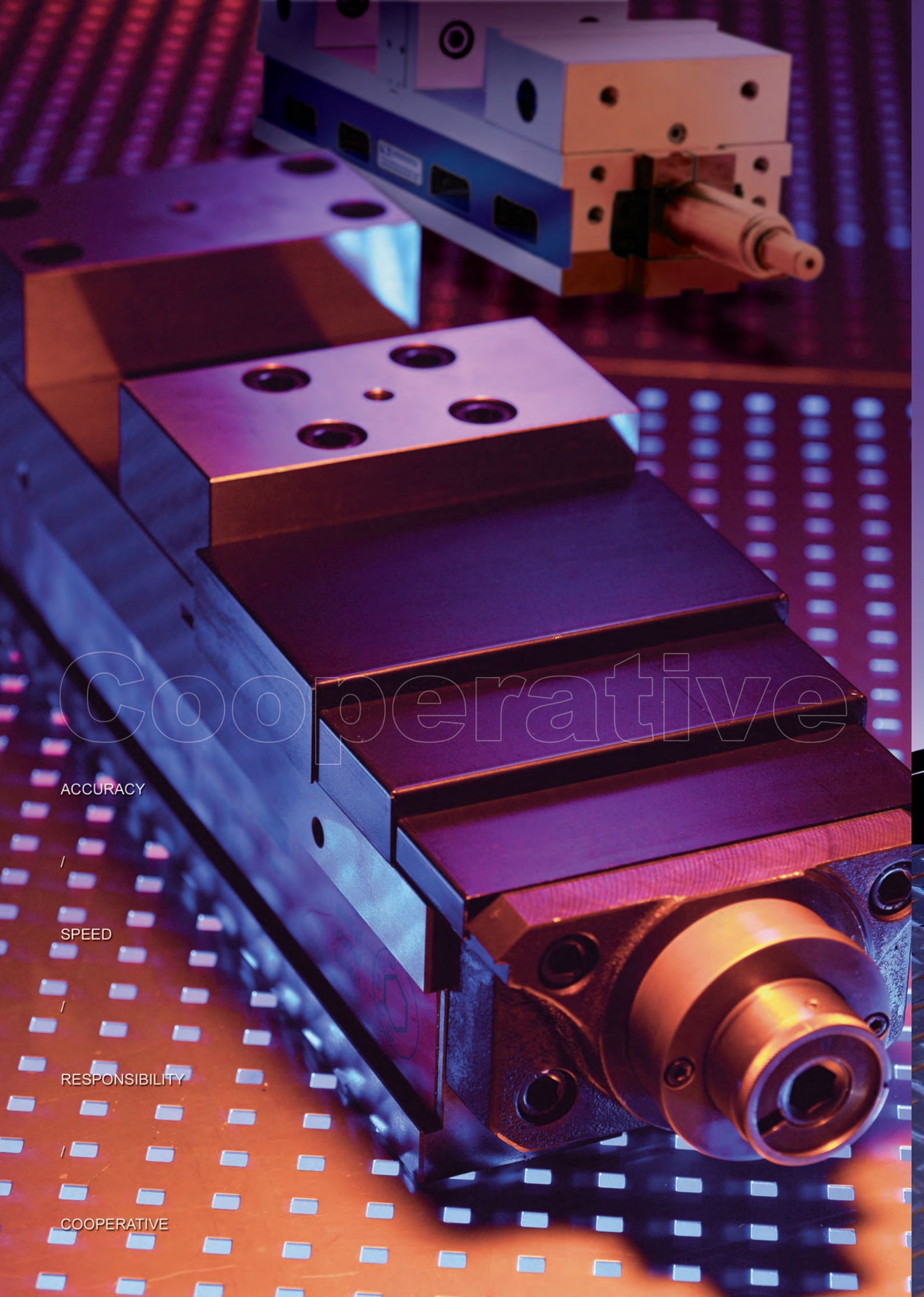
Please inform the collet size when ordering.

Please use following page as reference for collet size.

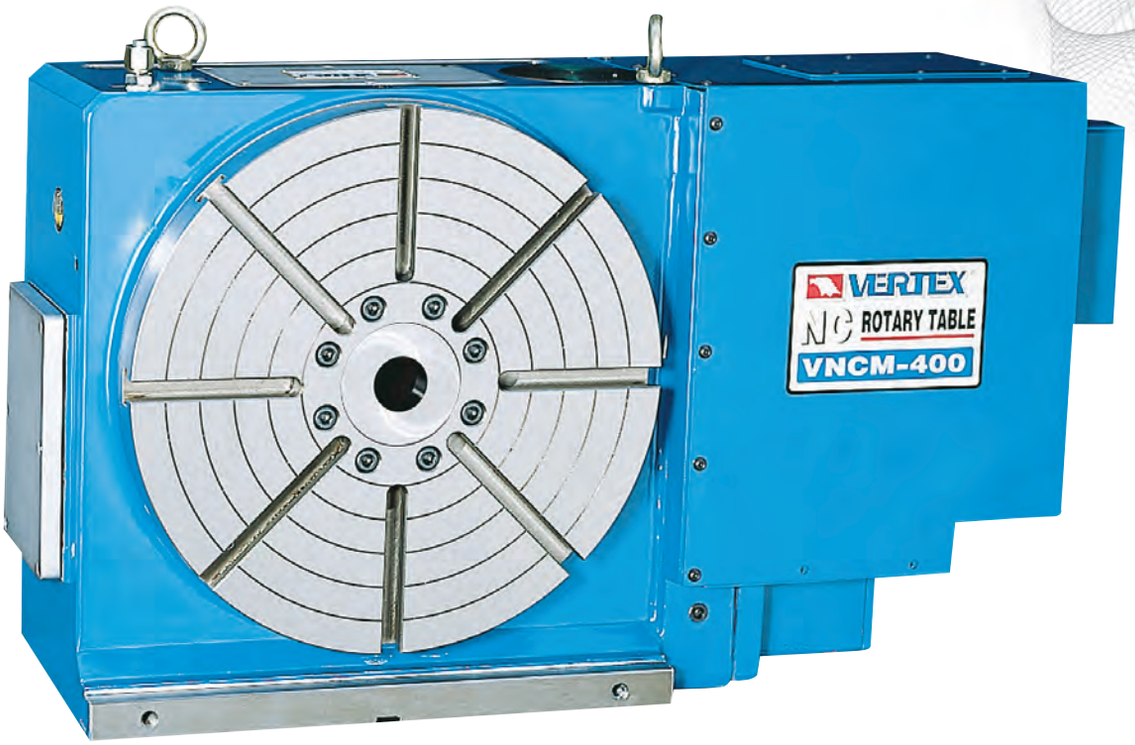
D1~D6	NC ROTARY TABLE SERIES
D07~D10	MC POWER VISE
D9~D10	DOUBLE CLAMP VISE
D11	BASE PLATE SERIES
D12	M/C ANGLE PLATE
D13	M/C CLAMPING CUBE
D14	ANGULAR HOLLOW BLOCKS
D15~D18	FLEXIBLE LINE UP VISE
D19	OIL MIST CLEANER

MACHINING CENTER ACCESSORIES

VERTEX®

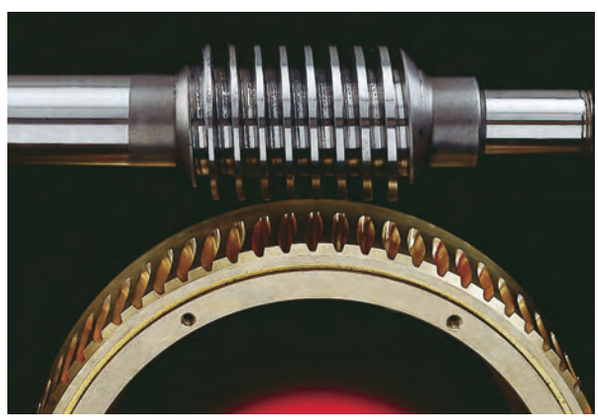

Cooperative
ACCURACY
/
SPEED
/
RESPONSIBILITY
/
COOPERATIVE

NC-Rotary Table



HIGH ACCURACY AND HIGH RIGIDITY

Adoption of new double-lead worm gear--engagement between worm wheel and worm shaft has been improved, and tooth profile has been modified--has contributed greatly to increased dynamic accuracy. To remove the defect of single-lead worm gear. Close-tolerance taper roller bearing assembly is used, and the rotating slide part is finished in a super precision manner, which in turm, implements highly improved overall accuracy.



DOUBLE LEAD WORM GEARS SYSTEM
- **New design/special material**

SLEEVE TYPE CLAMPING MECHANISM

with this system, the Rotary Table is clamped by applying hydraulic pressure to the outer circumference of the turn table. Since the sleeve is positioned closest to the workpiece, the table clamp force is enlarged. This system is not only advantageous for heavy duty cutting but also helps improve the machining accuracy and extend the service life of the Rotary Table.

- This rotary table has been specifically developed to fulfill the requirements of a fully automatic machinging process in association with a machine tool. They are used for miling, grinding and drilling of spindles, slots, plannes or bores in the radial or axial direction of the workpiece.
- Can be equipped with stepping motor or DC/AC servo motors.
- Carefully designed, rigid construction to assure high and constant indexing accuracy.
- Can operate as function M or as 4th axis or more, in machining units or numerically controlled machines, and are equally capable of being fitted to any other type of non-NC machine-tools.
- Hardened and ground steel worm, mounted on high precision combined radial-axial bearings.
- Worm mounted on an axial support system, which allows adjustment and suppression of any backlash existing between the worn and the worm-wheel after long-time service.
- High precision
  Axial and radial runout within 0.01mm, Cumulative indexing accurace within 15 sec.

PROGRAMMABLE SERVO MOTOR CONTROLLER

● SPECIFICATIONS

Unit:mm

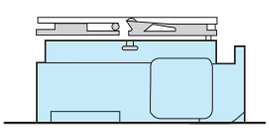
ORDER NO.	VNCM-150 L R	VNCM-220 L R	VNCM-250 L R	VNCM-320 L R		VNCM-400 L R
Right-hand type	O	O	O	O		O
Left-hand type	O	O	O	O		O
Turntable diameter	Ø160	Ø225	Ø250	Ø320		Ø400
Table height(Horizontal pos.)	150	165	165	220		250
Table center height(Vertical pos.)	135	160	160	210		255
Center bore diameter	Ø35H7	Ø40H7	Ø40H7	Ø40H7		Ø40H7
T-slot size	12H7	12H7	12H7	14H7		14H7
Guide-block size	14h7	14h7	14h7	18h7		18h7
Number of worm wheel teeth	72	72	72	72		72
Servo motor type	FANUC α 3	FANUC α 6	FANUC α 6	FANUC α 12	FANUC α 6	FANUC α 12
Speed reduction ratio	1/90	1/180	1/180	1/180	1/360	1/180
Table graduation angle per 1 pulse	0.001˚	0.001˚	0.001˚	0.001˚		0.001˚
Table rotation speed	22.2r.p.m./ (Motor 2,000r.p.m.)	11.1r.p.m./ (Motor 2,000r.p.m.)	11.1r.p.m./ (Motor 2,000r.p.m.)	11.1r.p.m./ (Motor 2,000r.p.m.)	5.5r.p.m./ (Motor 2,000r.p.m.)	11.1r.p.m./ (Motor 2,000r.p.m.)
Clamp method & Clamp torque (kg-m)	8/ (Air 5kg/cm²)	50/ (Hydraulic 35kg/ cm²)	50/ (Hydraulic 35kg/ cm²)	85/ (Hydraulic 35kg/cm²)		180/ (Hydraulic 35kg/ cm²)
Load capacity, horizontal(kg)	150	250	250	350		500
Load capacity, vertical(kg)	75	100	100	150		200
Inertia force (kg-cm-sec²)	4.3	12.3	12.3	38.5		99.8
Max.torque capacity of worm gear (kg-m)	15	48	48	78		170
Max. workpiece diameter	160	225	225	320		400
Cumulative indexing accuracy sec.	20″	15″	15″	15″		15″
Repeatability sec.	4″	4″	4″	4″		4″
Inertia force(convert into motor shaft) kg-cm-sec²X10⁻²	0.2	0.24	0.34	1.85	1.35	1.94
Net weight (kg)	55	75	75	200		300
CODE NO.	4001-001	4001-002	4001-003	4001-004		4001-005

● Other makers' servo motors can be installed.

● ACCURACY STANDARD

Unit:mm

NO.	Inspection Item		Inspection Item
1	Table top flatness (concave)	Per overall length	0.01
2	Table top runout		0.015
3	Parallelism of table top and frame bottom	Per overall length	0.02
4	Table spindle center runout		0.01
5	Center bore runout	Hole end	0.01
		Per 100mm	0.01
6	Perpendicularity of table top to frame bottom	Per overall length	0.02
7	Perpendicularit of table top to frame bottom guide block	Per overall length	0.02
8	Cumulative indexing accuracy		15″
9	Parallelism of center line between headstock and tailstock to frame bottom guide block	Per 300mm	0.02
10	Height difference of both center lines of headstock (Tailstock center line should be higher)		0.02

1


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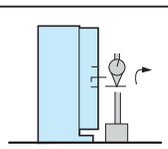

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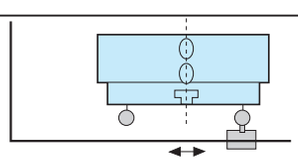

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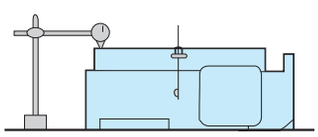

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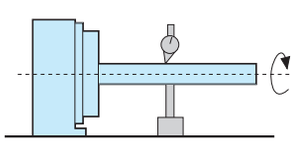

8 An optical measuring instrument should be used for indexing accuracy measurements.

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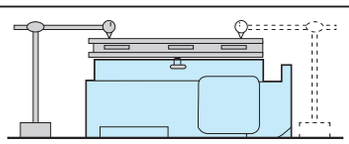

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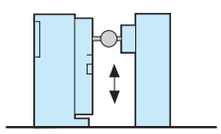

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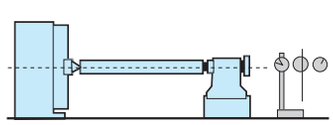
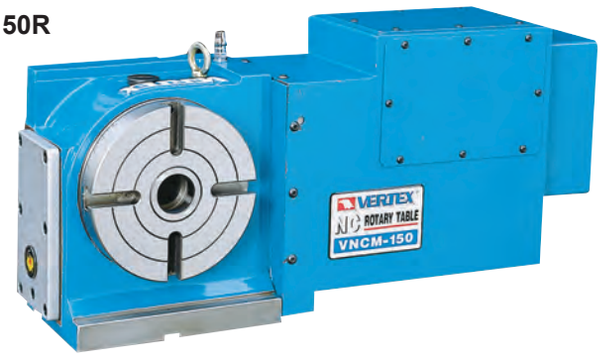
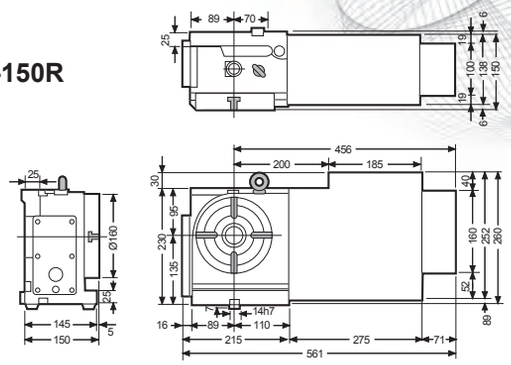


VERTEX

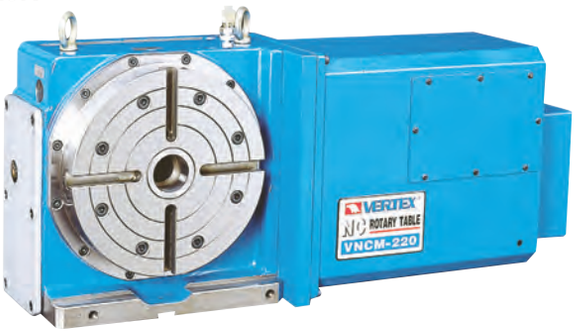
VNCM-150R



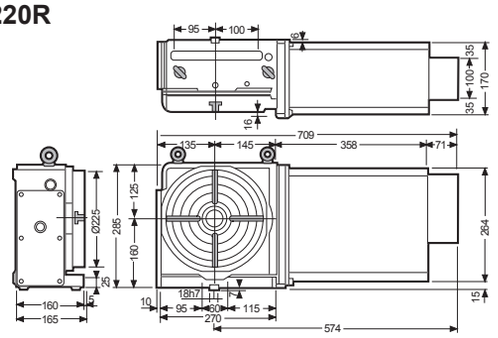
VNCM-150R



VNCM-220R

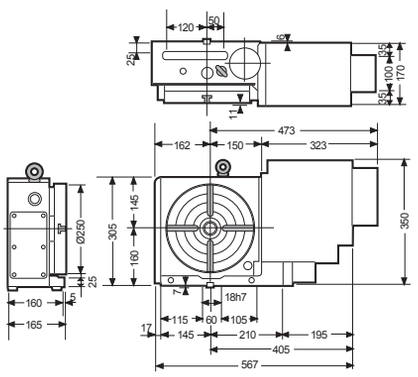


VNCM-220R

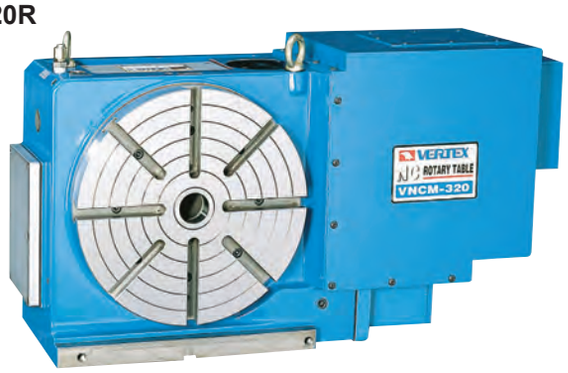


VNCM-250R

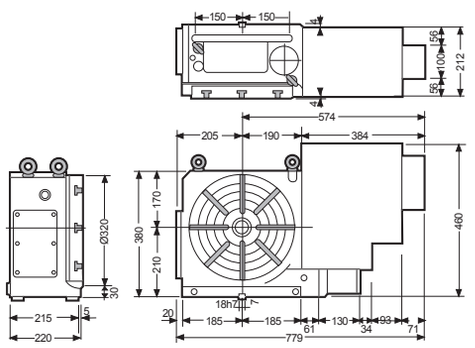
VNCM-250R



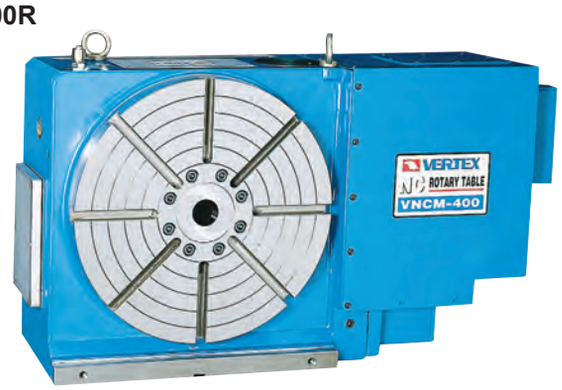
VNCM-320R



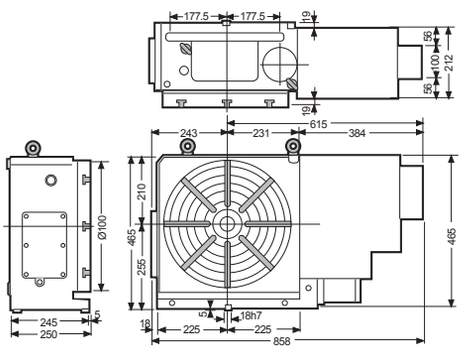
VNCM-320R



VNCM-400R



VNCM-400R



NC-Rotary Table

ORDER NO.VNCX-10 CODE NO.4001-010

- Motor case setted on the back of the body, increased the space for moving forward and backward, suitable for large or small NC machine using.
- Use of precision lead worm gear assures highly accurate dividing independently of table rotating direction. Further, no backlash will be produced.
- Wide range of machining is accomplished by connecting the Drive Table with Mcode of machining center.
- When used with machining center, the Drive Table will widen the range of applications; circular cutting dividing into equal parts, dividing into unequal parts, lead cutting, can cutting etc.
- MACHINE ZERO AND WORK ZERO. Zero Return Function to either Zero.
- BACKLASH COMPENSATION.
- BUILT-IN PNEUMATIC BRAKE FUNCTION.

Dimensions

Unit:mm

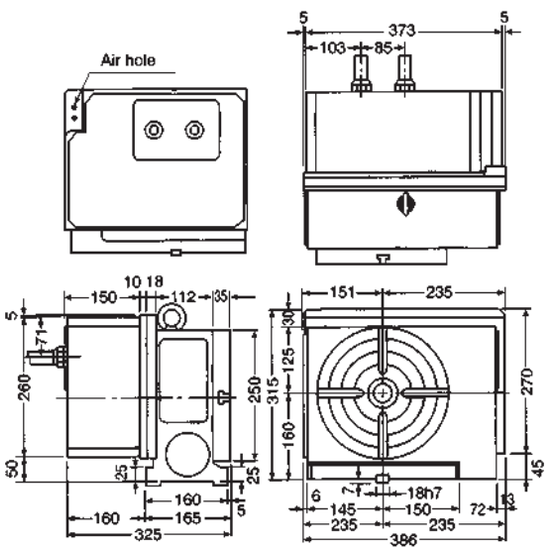
Item		
Table diameter		250
Table height		315
Center height		160
Center hole diameter		32
Table reference groove width		14
Key way		18
Clamping force(kgf-m)	Penumatic	20
Allowable work diameter		250
Allowable weight	Horizontal setup Vertical setup	200 100
Allowable work inertia(kgf-cm sec2)		12.5
Total reduction ratio		1:90
Rotary speed(rpm)		11.1
Allowable machine torque(kgf-m)		48

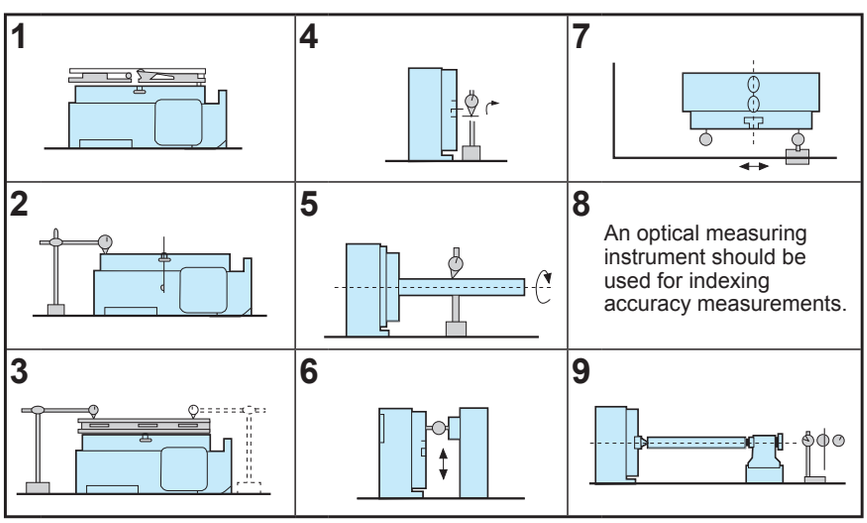
ACCURACY STANDARD

Unit:mm

NO	Inspection Itme		Tolerance
1	Table top flatness(concave)	Per overall length	0.01
2	Table top runout		0.015
3	Parallelism of table top and frame bottom	Per overall length	0.02
4	Table spindle center runout		0.01
5	Center bore runout	Hole end	0.01
		Per 100mm	0.01
6	Perpendicularity of table top to frame bottom	Per overall length	0.02
7	Perpendicularity of table top to frame bottom guide block	Per overall length	0.02
8	Cumulative indexing accuracy		15″
9	Parallelism of center line between headstock and tailstok to frame bottom guide block	Per 300mm	0.02
10	Height difference of both headstock and tailstock center lines(Tailstock center line should be higher)		0.02

VNCX-10

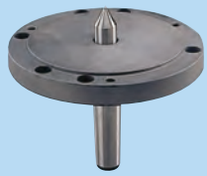




● Optional accessories (For NC ROTARY TABLE)

VHR-100MF
VHR-101MF
MITSUBISHI MOTOR & FANUC MOTOR

Servo controller + Servo motor



Flang & Center for VNCM-320, 400

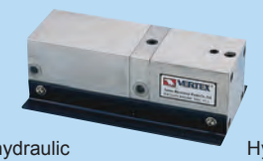
Automatic power chuck

Flanged scroll chuck

VHR-110F
VHR-112F

Stepping controller + Stepping motor

VHR-20



Air-hydraulic for the table clamp

Hydraulic unit (VNCM-320, 400)

Automatic tailstock

Manual tailstok

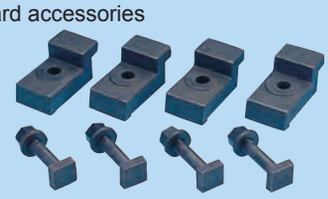
VHR-116S

SIEMERS MOTOR

VHR-10

Hydraulic unit

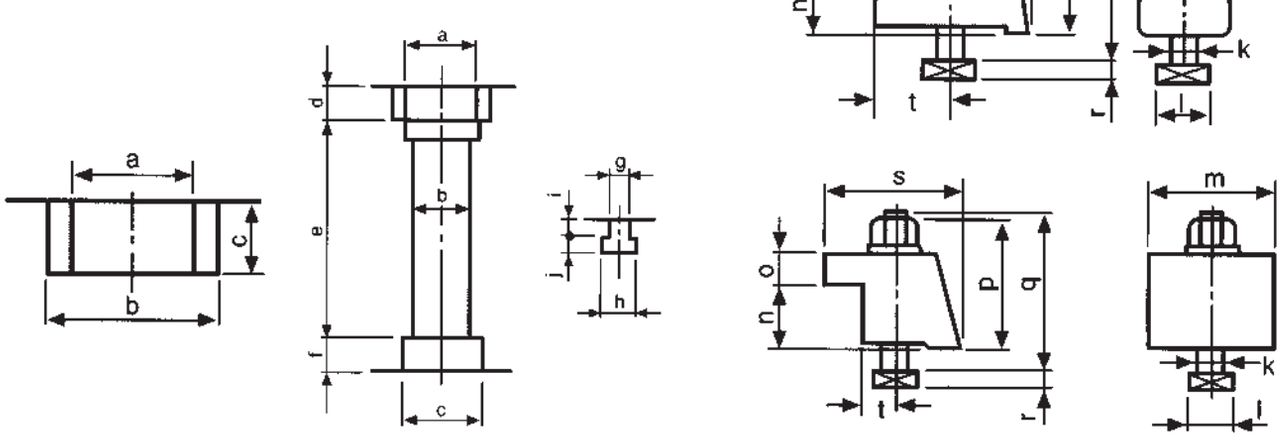
Standard accessories



Clamping blocks and bolts

ORDER NO.	Suitable for		CODE NO.
VHR-10	NC Rotary table		4002-010
VHR-20	NC Rotary table		4002-020
VHR-100MF	VNCM-150, 220, 250	MITSUBISHI & FANUC MOTOR	4002-030
VHR-101MF	VNCM-320, 400	MITSUBISHI & FANUC MOTOR	4002-031
VHR-110F	VNCM-150, 220, 250	FANUC MOTOR	4002-040
VHR-112F	VNCM-320, 400	STEPPING MOTOR	4002-041
VHR-116S	VNCM-150, 220, 250	STEPPING MOTOR	4002-042
VHR-117S	VNCM-320, 400	SIEMERS MOTOR	4002-043

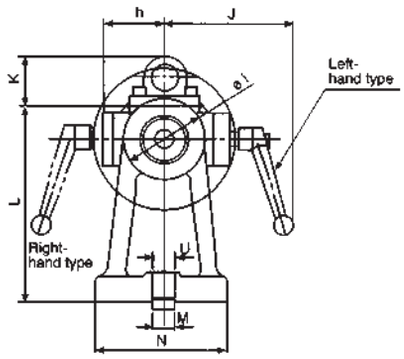
● CLAMPING BLOCKS AND BOLTS

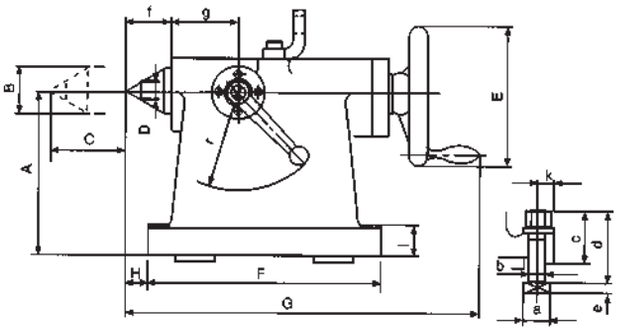


Unit:mm

ORDER NO.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t
VNCM-150	Ø 35H7	ø40	ø35	16	114	20	12H7	19	11	8	Ø12	□23	40	25	15	57	75	8	52	15
VNCM-220/250	Ø 40H7	ø32	ø45	20	124	20	12H7	19	11	8	Ø16	□28	40	25	12	43	63	11	80	33
VNCM-320	Ø 40H7	ø42	ø50	20	139	30	14H7	23	14	9	Ø16	□28	46	30	15	46	70	11	90	31
VNCM-400	Ø 40H7	ø41	ø50	20	164	30	14H7	23	14	9	Ø16	□28	46	30	15	46	70	11	90	31

Tailstock For NC Rotary Table





Unit:mm

Main dimension / ORDER NO. / For		Center height A	Center diameter B	Storke C	pointed end diameter D	Handle diameter E	Base dimensions FXM	G	H	I	J	K	L
TS-135	VNCM-150	135	ø45 MT#3	55	ø14	125	215x120	332	25	25	109	-	164
TS-160	VNCM-220 VNCX-10 VNCM-250	160	ø45 MT#3		ø18	140	230x130	356	30	30	129	53	193
TS-210	VNCM-320	210					230x146						243
TS-255	VNCM-400	255	ø55 MT#3	50		160	270x170	412		35	131		255

Unit:mm

Main dimension / ORDER NO. / For		Guide -block size M	a	b	c	d	e	u	f	g	h	j	k	r	Net weight (kgs)	CODE NO.
TS-135	VNCM-150	18	23	12	42	60	8	19	40	69	44	70	17.5	80	20.6	4002-001
			26	16	46	70	10									
			28	16	46	70	11									
TS-160	VNCM-220 VNCX-10 VNCM-250		20	12	49	70	8	19	45	70	52	80		95	23.1	4002-002
			26	16	51	75	10									
TS-210	VNCM-320		28	16	51	72	11								29.4	4002-003
			34	20	57	85	13	23								
TS-255	VNCM-400		32	18	60	90	11	19	50	75	54	85			38.7	4002-004
			34	20	52	90	13	23								

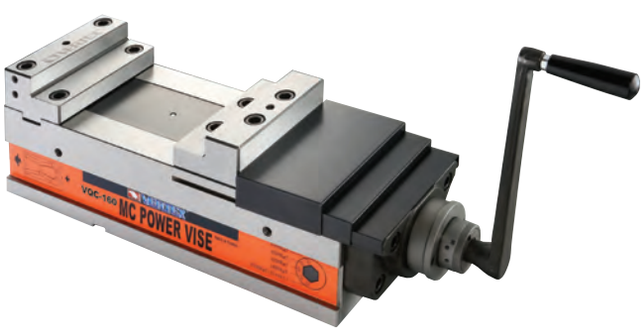
Listed in the above table are examples of applicable models. Those not listed above should be selected so that the center height of the rotary table and dividing heads is the same as that of the tailstock.

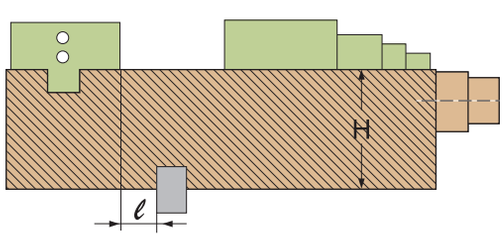
MC Power Vise

NEW

Great Capacity, Wide Clamping Range
Constant Full Length

- **Ultra clamping length more than other VMC-vise**
- Big jaw opening.
- Easy operation, compact design.
- Even if the jaw is opened, it does not interfere with the cover of the mounting machine.
- Quick set up, time saving.
- When jaw is opened, it is not affect mounting machine's cover.





H-Accurance 0.01mm
ℓ-Accurance 0.01mm

SAME HEIGHT GUARANTEE

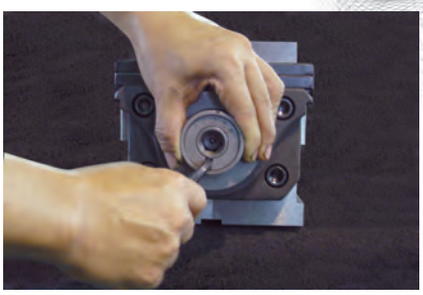
Flexible Clamp System

- High precision system keep the dimension tolerance within 0.01/100mm.
- Vise clamps long size workpieces securely & steady.
- High Accurate System: tolerance within 0.01/100mm.
- VQC Vise can hold long workpiece tight and fixed.

MC Power Vise

High power & fine balanced body structure stable clamping force

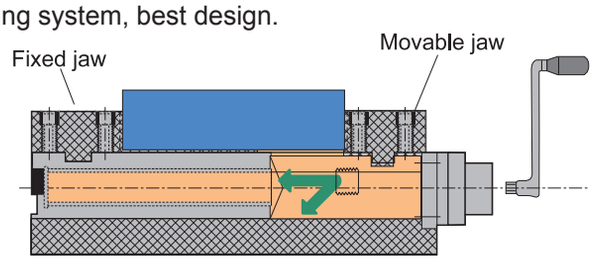
- The clamping force can be easily adjusted due to the preset mechanism.
- Mechanical type toggle enhancement mechanism.
- Clamping force can adjust to suit for different material, such as steel, brass and aluminum.
- Clamping force can be adjusted for customer's requirement.
- Adjustable clamping force device.



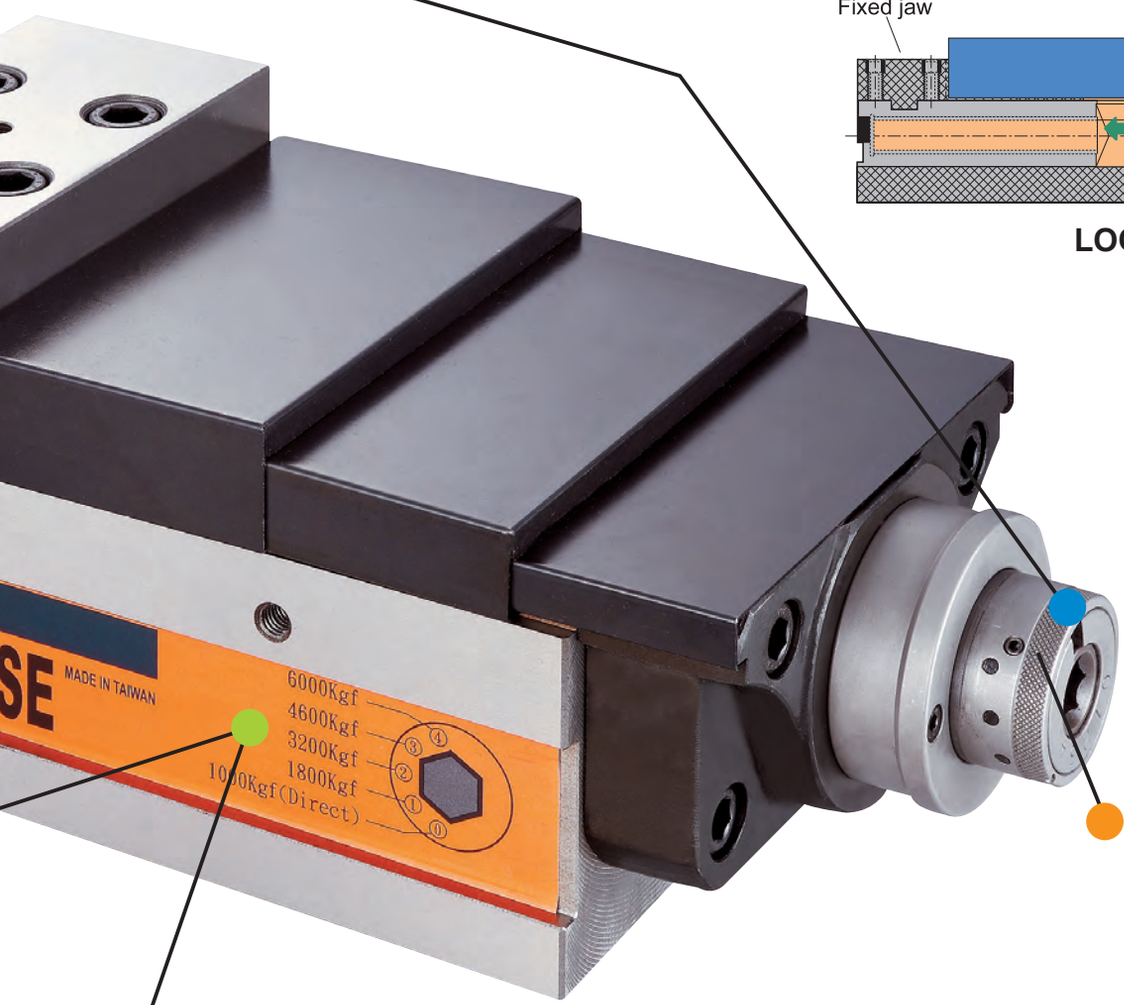
How to adjust the clamping force

MC Power vises guarantee the lifting of workpiece is within of 0.02/100mm.

- Adapt a blinding beam system with workpiece lift.
- Prevention mechanism. Pull-in efect.
- Adapt a lift preventing system, best design.



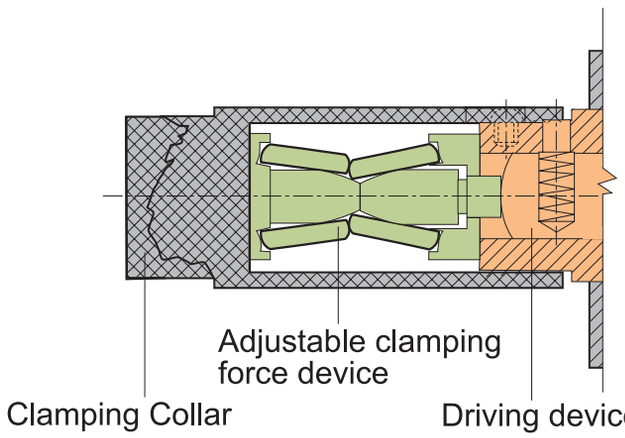
LOCK DOWN DESIGN



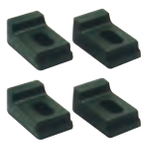
CLAMPING FORCE ADJUSTABLE DESIGN From 1800 kgf to 6000 Kgf

Toggle joint device mechanism.

- **One of the best vise mechanism design**
- After the moveble jaw touch,turning the handle, only the drive shaft is transmitted to the enhancement process of toggle joint device mechanism unit and the movable jaw clamps the work through the clamp spindle at the preset force.
- Clamp work piece, keep turning the handle, until the motion stop which means VTX mechanism has lock workpiece in the pre-set force.



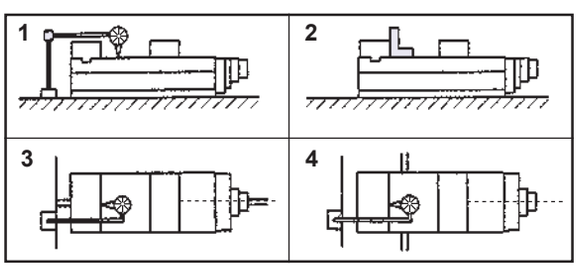
MC Power Vise



TOGGLE JOINT MECHANISM DESIGN FOR HEAVY DUTY WORKING

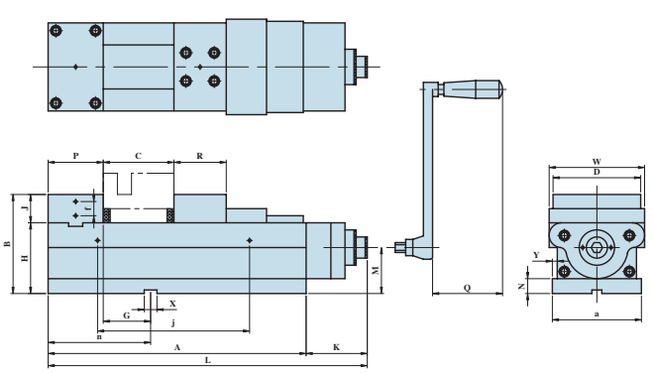
Features

- Compact design. Great clamping capacity & rigid.
- “Toggle joint mechanism”. Provides a steady clamping force against shocks and vibrations during the operatioons, since it clamps the workpiece resiliently with an aid of the “disc-springs” mounted inside.
- Strong clamping force.
- Large jaw stroke range.
- Exclusive Power Vise provide same height same position for horizontal and vertical MC, NC, Machine.
- Body is made of FCD60 high quaility ductile cast iron, resists deflection or bending.
- Sliding bed ways flame hardened and ground.
- Concealed spindle for protection against chips and dirt.
- Quick of clamping & locking and easy of operation.



INSPECTION SPECIFICATION

NO.	Inspection Item Per (100mm)	Guaranteed
1	Parallelism: running face to bottom of bed.	0.01/100mm
2	Squareness :between running face and jaw plate.	0.02/100mm
3	Squareness: keways on bottom of bed to jaw plate.	0.02/100mm
4	Parallelism: running face of the test block to bottom of bed.	0.02/100mm



CLAMPING CAPACITY

ORDER NO.	JAW H	JAW Open C	H	MAX. Clamping Force (KN)	G.W. kg
VQC-125	40	205	140	40	40.4
VQC-160	45	275	165	60	72.3
VQC-160L	45	355	165	60	78.6
VQC-200L	70	405	190	60	108

ORDER NO.	A	B	a	D	P	R	G	H	J	K	L
VQC-125	366	140	126	124.5	78	74	66	100	40	86	452
VQC-160	456	165	161	159.5	86	86	58	120	45	98	554
VQC-160L	536	160	162	160	86	86	58	115	45	98	634
VQC-200L	616	180	202	200	102	98	74	110	70	95	710

ORDER NO.	M	N	Q	W	X	Y	C OPEN	f	j	n	CODE NO.
VQC-125	65	21	74	135	18	7	205	20	216	145	4005-005
VQC-160	78	21	94	170	18	7	275	20	286	145	4005-006
VQC-160L	78	21	94	174	18	7	355	20	286	145	4005-007
VQC-200L	75	21	96	217	18	7	405	20	386	177	4005-008

MC Power Vise

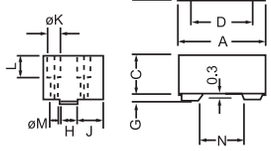
ADJUSTING METHOD
1. FIXED COLLAR
2. TURN BY WENCH TO GET NO.
   0, 1, 2, 3, 4. TO HAVE CLAMPING FORCE

CLAMPING FORCE CHART

SCALE / ORDER NO. / KN	4	3	2	1	0
VQC-125	-	40KN	28KN	16KN	8KN
VQC-160	60KN	46KN	32KN	18KN	10KN
VQC-160L	60KN	45KN	32KN	20KN	10KN
VQC-200L	60KN	45KN	32KN	20KN	10KN

OPTIONAL: Soft jaw for different shape workpiece FJ & MJ can for cutting

FJ

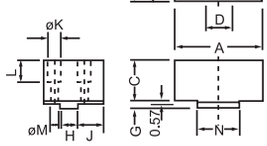


Fixed side

FIXED JAW

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	CODE NO.
VQC-125FJ	124.5	91	60	88	45	29.5	8	24	40	19	33.5	13	63	4005-014
VQC-160FJ	159.5	102	60	124	50	34	9	28	45	22	30	15	84	4005-015
VQC-160L-FJ	159.5	102	60	124	50	34	9	28	45	22	30	15	84	4005-016
VQC-200L-FJ	200	122	75	140	62	40	9	28	57	25	37	17	100	4005-016A

MJ



Movable side

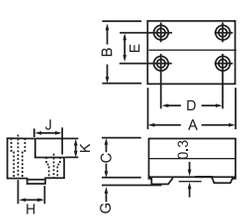
MOVEABLE JAW

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	CODE NO.
VQC-125MJ	124.5	87	60	35	42	29	8	24	38	19	33.5	13	59.5	4005-017
VQC-160MJ	159.5	102	60	56	50	34	9	28	45	22	30	15	80.5	4005-018
VQC-160L-MJ	159.5	102	60	56	50	34	9	28	45	22	30	15	80.5	4005-019
VQC-200L-MJ	200	117	75	62	59	39	9	28	54.5	25	37	17	95	4005-019A

VISE JAWS CAN TURN 180º FOR YOUR REQUIREMENT.

OPTIONAL: Hard jaw for thin type workpiece

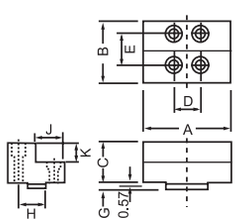
FJL



L TYPE FIXED JAW

ORDER NO.	A	B	C	D	E	G	H	J	K	CODE NO.
VQC-125FJL	124.5	78	40	88	45	8	24	39	20	4005-008A
VQC-160FJL	159.5	86	50	124	50	9	28	43	25	4005-009
VQC-160L-FJL	159.5	86	50	124	50	9	28	43	25	4005-010
VQC-200L-FJL	200	102	70	140	62	9	28	51	35	4005-010A

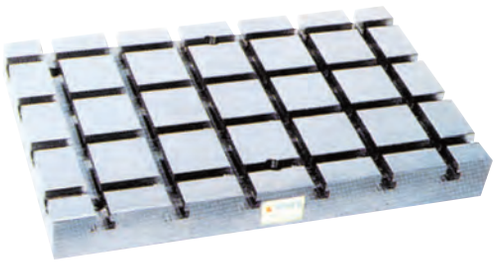
MJL

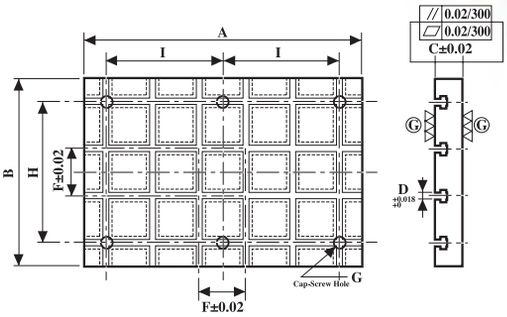


L TYPE MOVEABLE JAW

ORDER NO.	A	B	C	D	E	G	H	J	K	CODE NO.
VQC-125MJL	124.5	74	40	35	42	8	24	37	20	4005-011
VQC-160MJL	159.5	86	50	56	50	9	28	43	25	4005-012
VQC-160L-MJL	159.5	86	50	56	50	9	28	43	25	4005-013
VQC-200L-MJL	200	98	70	62	59	9	28	49	35	4005-013A

Base Plate Series





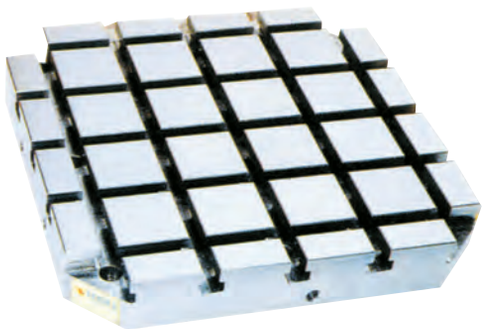
SUB TABLE T-SLOT TYPE

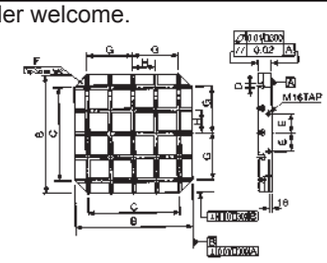
Sub-plates used on vertical machining centers and larger milling machines.
They protect the surface of machine table, and provide larger space for setting workpieces and minimize loss of operating time of expensive machine tools.
Material: Close grained cast iron, Annealed
Finish: Top and bottom ground

Unit:mm

ORDER NO.	A	B	C(±0.02)	D	E	F(±0.02)	G	kg	CODE NO.
TBP-6040	600	400	60	14	50	100	Ø18	100	4006-001
TBP-6050	600	500	60	14	50	100	Ø18	125	4006-002
TBP-6060	600	600	60	14	50	100	Ø18	149	4006-003
TBP-8040	800	400	60	14	50	100	Ø18	133	4006-004
TBP-9045	900	450	60	14	50	100	Ø18	169	4006-005
TBP-10050	1000	500	60	14	50	100	Ø18	207	4006-006
TBP-6040D	600	400	75	18	50	100	Ø18	120	4006-007
TBP-6050D	600	500	75	18	50	100	Ø18	150	4006-008
TBP-6060D	600	600	75	18	50	100	Ø18	179	4006-009
TBP-8040D	800	400	75	18	50	100	Ø18	160	4006-010
TBP-9045D	900	450	75	18	50	100	Ø18	204	4006-011
TBP-10050D	1000	500	75	18	50	100	Ø18	248	4006-012

Special dimension's order welcome.



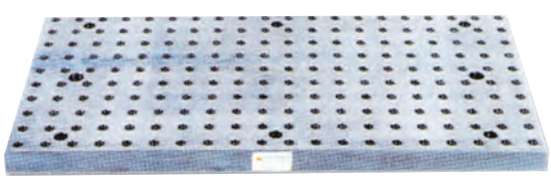


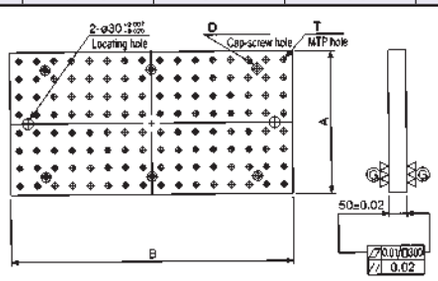
SQUARE TYPE

Unit:mm

ORDER NO.	A(±0.02)	B	C	D(H7)	E	F	G(±0.02)	H(±0.02)	kg	CODE NO
SBP-4040	60	400	320	14	55	Ø18	160	80	66	4006-020
SBP-5050	60	500	400	14	75	Ø18	200	100	90	4006-021
SBP-6363	60	630	500	14	100	Ø18	250	125	149	4006-022
SBP-8080	60	800	640	14	135	Ø18	320	160	230	4006-023
SBP-4040A	75	400	320	18	55	Ø18	160	80	85	4006-024
SBP-5050A	75	500	400	18	75	Ø18	200	100	118	4006-025
SBP-6363A	75	630	500	18	100	Ø18	250	125	195	4006-026
SBP-8080A	75	800	640	18	135	Ø18	320	160	298	4006-027

Special dimension's order welcome.





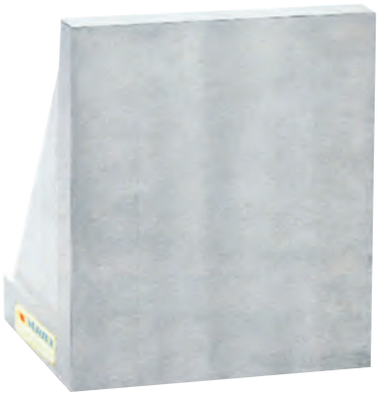
SUB TABLE THERAD TYPE

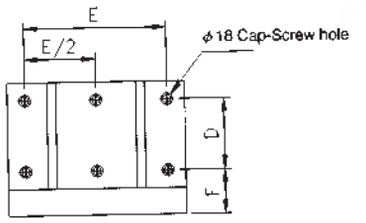
Unit:mm

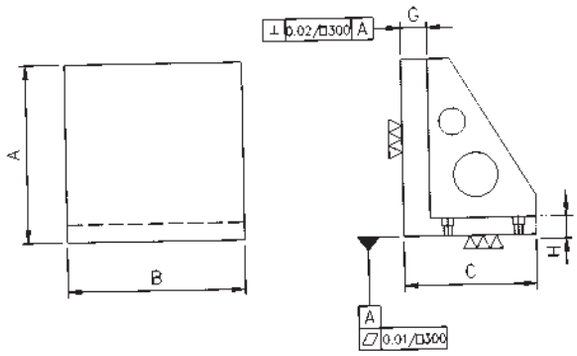
ORDER NO.	A	B	D	T		NO. OF MTP holse	KGS	CODE NO.
				(F7)	TAP			
HBP-4060	400	600	Ø18	Ø12	M12	96	90	4006-030
HBP-5060	500	600	Ø18	Ø12	M12	120	112	4006-031
HBP-6060	600	600	Ø18	Ø12	M12	144	134	4006-032
HBP-4080	400	800	Ø18	Ø12	M12	128	119	4006-033
HBP-4590	450	900	Ø18	Ø12	M12	162	151	4006-034
HBP-50100	500	1000	Ø18	Ø12	M12	200	187	4006-035
HBP-4060T	400	600	Ø18	Ø16	M16	96	87	4006-036
HBP-5060T	500	600	Ø18	Ø16	M16	120	108	4006-037
HBP-6060T	600	600	Ø18	Ø16	M16	144	129	4006-038
HBP-4080T	400	800	Ø18	Ø16	M16	128	115	4006-039
HBP-4590T	450	900	Ø18	Ø16	M16	162	146	4006-040
HBP-50100T	500	1000	Ø18	Ø16	M16	200	180	4006-041

Special dimension's order welcome.

M/C Angle Plate 90º





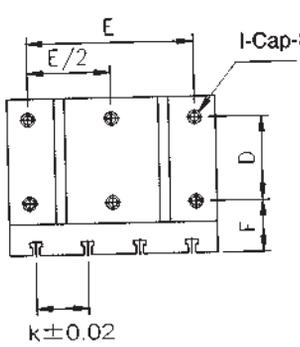


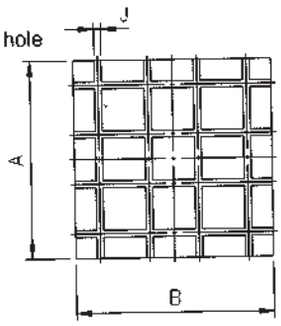
- Material/Finish:
  Material:FC300(JIS)/GG30(DIN)
  Heat treated (Normalized)
- Application:Good for horizontal M/C
- Features:Free to finish an actual required hole pattern for your special jig.
- eye bolt incuded.

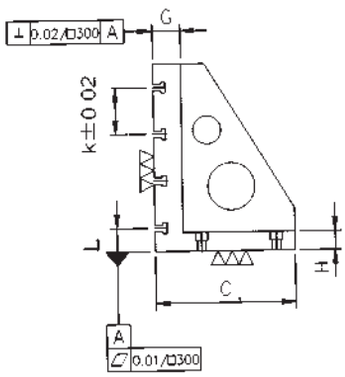
ORDER NO.	A	B	C	D	E	F	G	H	kgs	CODE NO.
BP20-30	300	300	220	100	250	90	40	30	52	4007-001
BP20-40	400	400	280	160	320	90	40	30	90	4007-002
BP20-50	500	500	350	200	400	90	50	35	175	4007-003
BP20-60	630	630	450	250	500	100	50	40	305	4007-004
BP20-80	800	800	550	302	640	115	50	45	480	4007-005

M/C Angle Plate 90º

T-SLOT TYPE



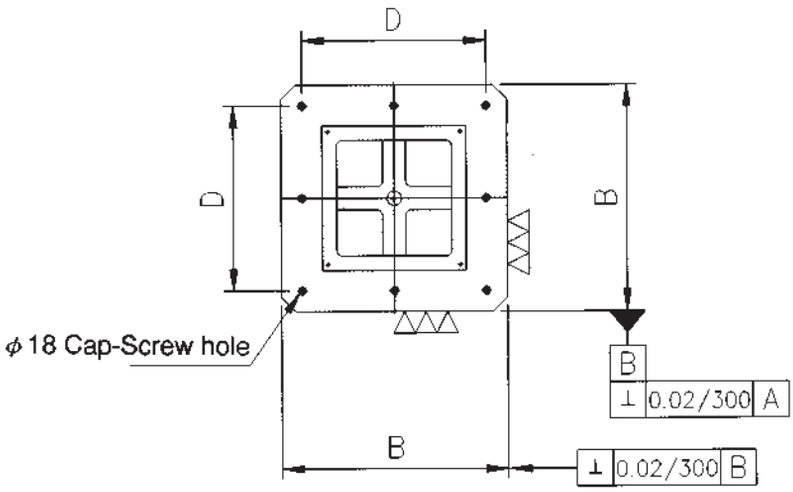


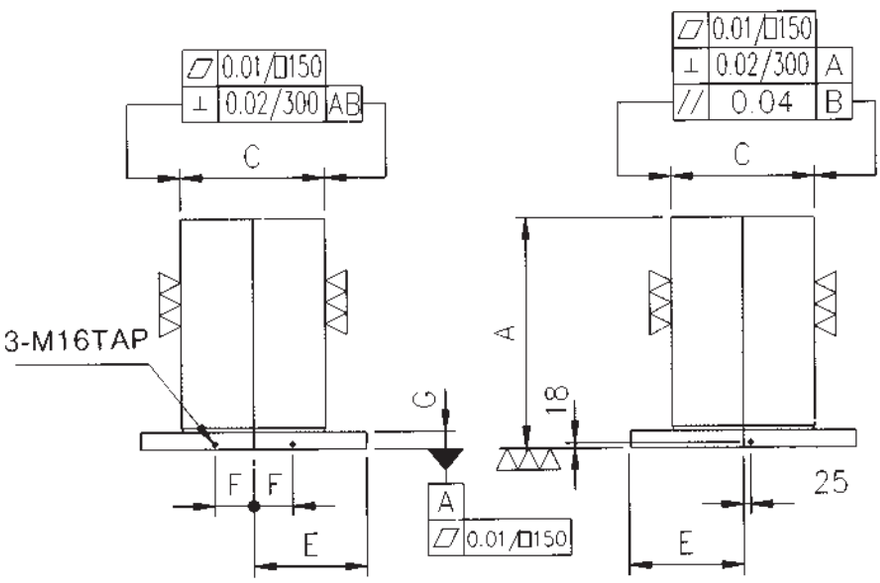


ORDER NO.	A	B	C	D	E	F	G	H	I	J	K (+0.02)	L	KGS	CODE NO.
BP22-30	300	300	220	100	250	90	60	30	ø18	14	100	50	62.5	4007-010
BP22-40	400	400	280	160	320	90	60	30	ø18	14	100	50	114.2	4007-011
BP22-50	500	500	350	200	400	90	60	35	ø18	14	100	50	184	4007-012
BP22-60	630	630	450	250	500	100	60	40	ø18	14	125	65	316	4007-013
BP22-80	800	800	550	320	640	115	75	45	ø18	14	150	100	577	4007-014
BP22-830	300	300	220	100	250	90	60	30	ø18	18	100	50	59.2	4007-015
BP22-840	400	400	280	160	320	90	60	30	ø18	18	100	50	111.2	4007-016
BP22-850	500	500	350	200	400	90	60	35	ø18	18	100	50	175	4007-017
BP22-860	630	630	450	250	500	100	65	40	ø18	18	125	65	304	4007-018

M/C Clamping Cube

- Material/Finish:
  Material:FC300(JIS)/GG30(DIN)
  Heat treated (Normalized)
- Application:Good for horizontal M/C
- Features:Free to finish an actual required hole pattern for your special jig.
- eye bolt included.

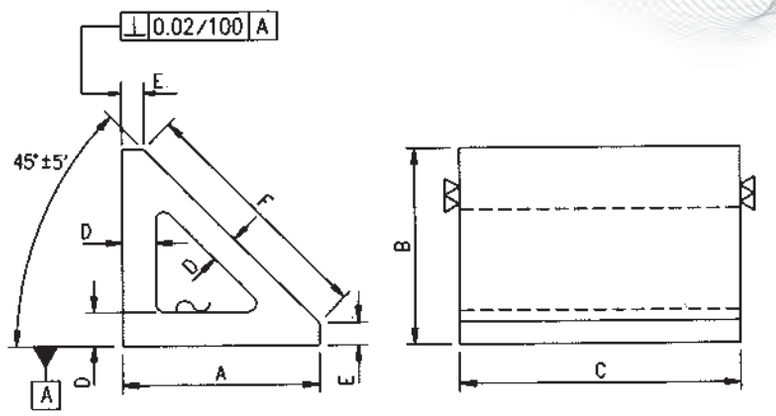




SPECIAL DESIGN WELCOM

ORDER NO.	A	B	C	D	E	F	G	NO.of Mounting holes	kg	CODE NO.
BP07-10	500	400	250	320	200	55	50	4	175	4007-020
BP07-20	600	500	300	400	250	75	50	8	240	4007-021
BP07-30	700	630	350	500	315	100	50	8	390	4007-022
BP07-40	800	800	500	640	400	135	50	8	745	4007-023

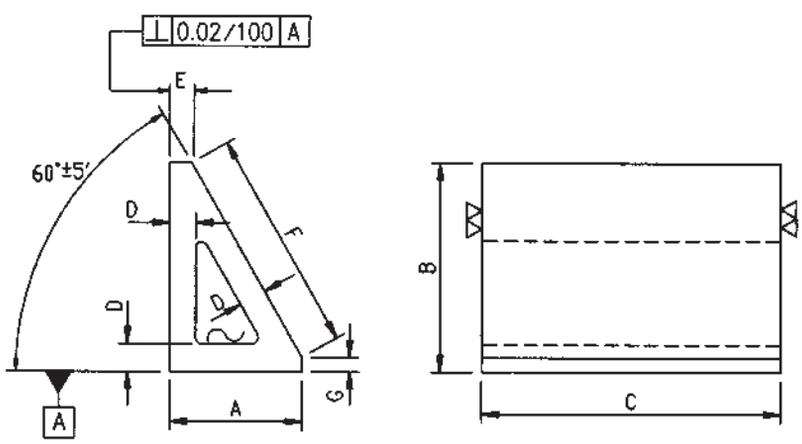
Angular Hollow Block 45º



Material:Cast Iron
FC-300
GG-30

ORDER NO.	A	B	C	D	E	F	kgs	CODE NO.
BC45-15	100	100	150	14	10	127	4.5	4007-030
BC45-30	100	100	300	14	10	127	8.8	4007-031
BC45-151	200	200	150	22	20	255	15.0	4007-032
BC45-301	200	200	300	22	20	255	29.0	4007-033

Angular Hollow Block 30º

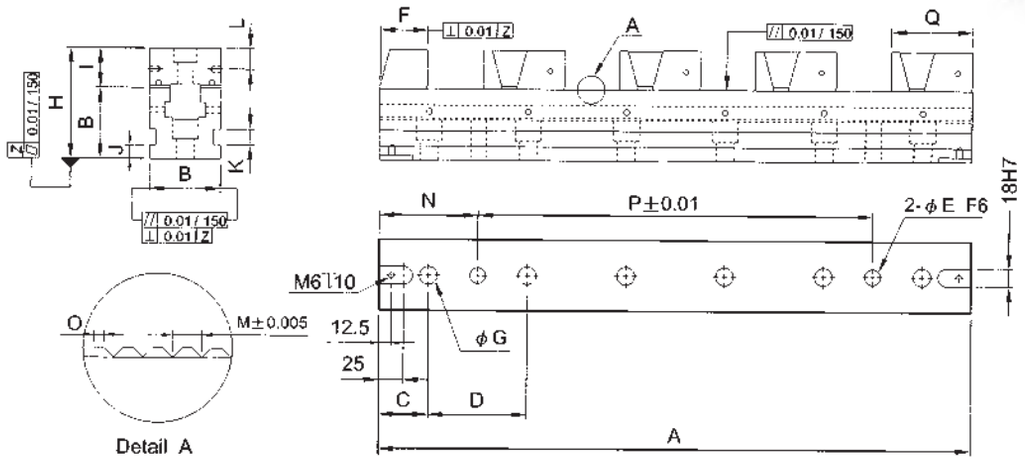


Material: Cast Iron
FC-300
GG-30

ORDER NO.	A	B	C	D	E	F	G	kgs	CODE NO.
BC30-15	63	100	150	12	9	108	6	3.0	4007-040
BC30-30	63	100	300	12	9	108	6	6.0	4007-041
BC30-151	125	200	150	20	14	222	8	9.5	4007-042
BC30-301	125	200	300	20	14	222	8	19.0	4007-043

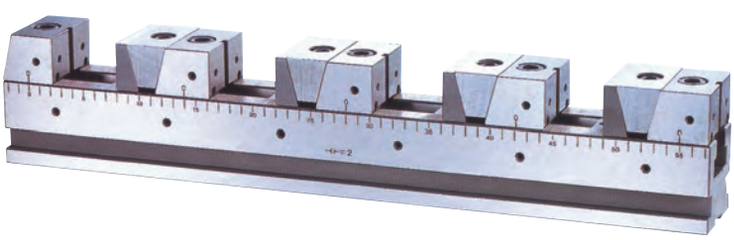
Flexible Line Up Vice

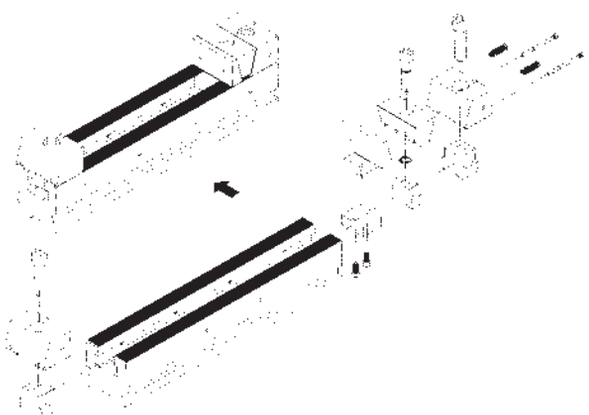
STANDARD STYLE
4 POSITION FOR EACH ITEM.



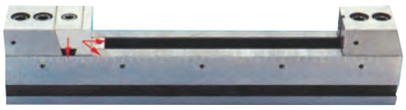
ORDER NO.	A	B±0.01	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	KG	CODE NO.
VFS-5030	300	50	30	80	12	36	13	75	24.8	10	12	12.5	1.5	70	0.5	160	60	8.5	4007-050
VFS-5030G			50	100										100		100			4007-051
VFS-5040	400	50	40	80	12	36	13	75	24.8	10	12	12.5	1.5	80	0.5	240	60	10.5	4007-052
VFS-5040G			50	100										100		200			4007-053
VFS-5050	500	50	50	80	12	36	13	75	24.8	10	12	12.5	1.5	90	0.5	320	60	12.5	4007-054
VFS-5050G				100										100		300			4007-055
VFS-5060	600	50	60	80	12	36	13	75	24.8	10	12	12.5	1.5	100	0.5	400	60	14	4007-056
VFS-5060G			50	100															4007-057
VFS-5070	700	50	70	80	12	36	13	75	24.8	10	12	12.5	1.5	110	0.5	480	60	15.5	4007-058
VFS-5070G			50	100										100		500			4007-059
VFS-7240	400	72	50	100	16	48	18	110	39.7	14	16	21.3	2.0	100	0.7	200	82	23	4007-060
VFS-7250	500	72	50	100	16	48	18	110	39.7	14	16	21.3	2.0	100	0.7	300	82	25	4007-061
VFS-7260	600	72	50	100	16	48	18	110	39.7	14	16	21.3	2.0	100	0.7	400	82	27	4007-062
VFS-7270	700	72	50	100	16	48	18	110	39.7	14	16	21.3	2.0	100	0.7	500	82	30	4007-063

Material：tool steel
Hardness：over HRC55

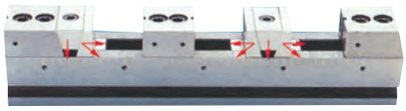




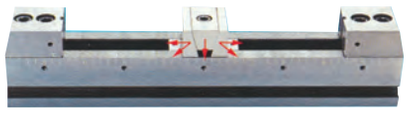
Flexible Line UP Vice



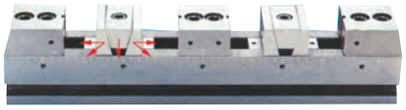
one workpieces



two workpieces



three workpieces

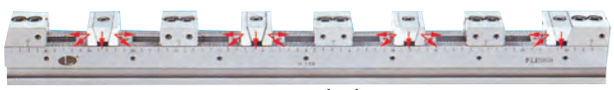


four workpieces

five workpieces

ONE WAY FIX JAW TYPE

six workpieces



seven workpieces

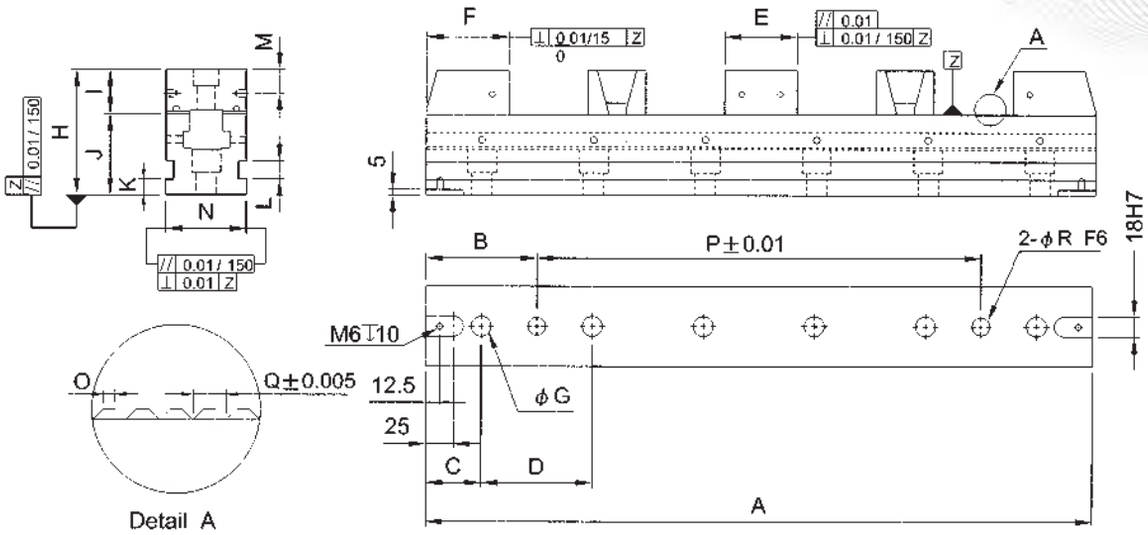
Maximum width of the workpieces can be clamped

ORDER NO.	One workpiece	Two workpieces	Three workpieces	Four workpieces
VFS-5030	203	71	27	--
VFS-5040	303	121	60	30
VFS-5050	403	171	94	55
VFS-5060	503	221	127	80
VFS-5070	603	271	160	105
VFS-7240	269	93	35	--
VFS-7250	369	143	68	30
VFS-7260	469	193	101	55
VFS-7270	569	243	135	80

ORDER NO.	Five workpiece	Six workpiece	Seven workpiece	Eight workpiece	Nine workpiece
VFS-5030	--	--	--	--	--
VFS-5040	--	--	--	--	--
VFS-5050	32	16	--	--	--
VFS-5060	52	33	20	--	--
VFS-5070	72	50	34	22	13
VFS-7240	--	--	--	--	--
VFS-7250	--	--	--	--	--
VFS-7260	28	--	--	--	--
VFS-7270	48	26	--	--	--

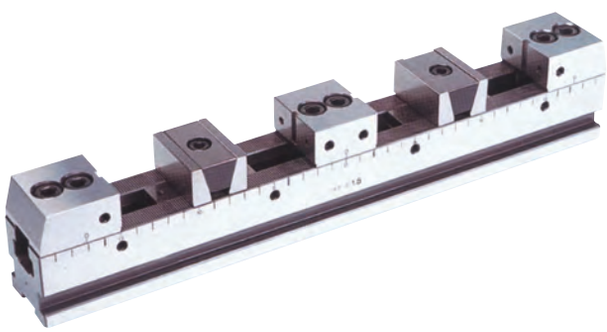
Flexible Line UP Vice

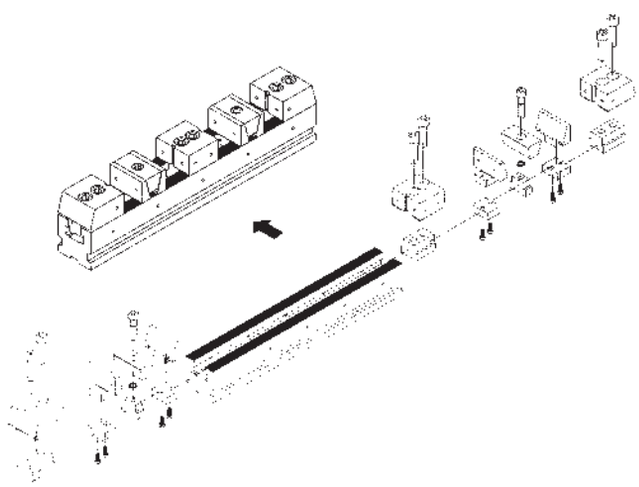
STANDARD STYLE
4 POSITION FOR EACH ITEM.



ORDER NO.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	KG	CODE NO.
VFL-5030	300	70	30	80	44	50	13	75	24.8	50	10	12	12.5	50	0.5	160	1.5	12	7	4007-080
VFL-5030G		100	50	100												100				4007-081
VFL-5040	400	80	40	80	44	50	13	75	24.8	50	10	12	12.5	50	0.5	240	1.5	12	9	4007-082
VFL-5040G		100	50	100												200				4007-083
VFL-5050	500	90	50	80	44	50	13	75	24.8	50	10	12	12.5	50	0.5	320	1.5	12	10	4007-084
VFL-5050G		100	50	100												300				4007-085
VFL-5060	600	100	60	80	44	50	13	75	24.8	55	10	12	12.5	50	0.5	400	1.5	12	11	4007-086
VFL-5060G			50	100																4007-087
VFL-5070	700	110	70	80	44	50	13	75	24.8	50	10	12	12.5	50	0.5	480	1.5	12	14	4007-088
VFL-5070G		100	50	100												500				4007-089
VFL-7240	400	100	50	100	65	75	18	110	39.7	72	14	16	21.3	72	0.7	200	2.0	16	19	4007-090
VFL-7250	500	100	50	100	65	75	18	110	39.7	72	14	16	21.3	72	0.7	300	2.0	16	25	4007-091
VFL-7260	600	100	50	100	65	75	18	110	39.7	72	14	16	21.3	72	0.7	400	2.0	16	27	4007-092
VFL-7270	700	100	50	100	65	75	18	110	39.7	72	14	16	21.3	72	0.7	500	2.0	16	30	4007-093

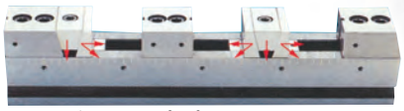
Material:tool steel
Hardness:over HRC55

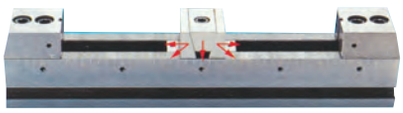


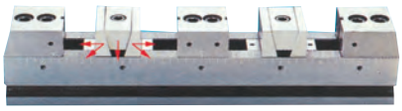


Flexible Line UP Vice

one workpieces


two workpieces


three workpieces


four workpieces

five workpieces

TOW WAY FIX JAW TYPE

six workpieces

seven workpieces

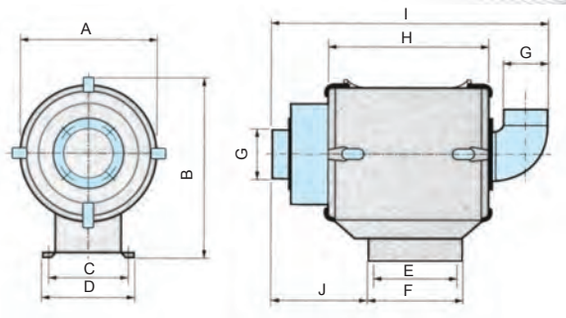
Maximum width of the workpieces can be clamped

ORDER NO.	One workpiece	Two workpieces	Three workpieces	Four workpieces	Five workpieces
VFL-5030	176	82	32	21	--
VFL-5040	276	132	65	46	23
VFL-5050	376	182	98	71	43
VFL-5060	476	232	132	96	63
VFL-7240	217	100	33	20	--
VFL-7250	317	150	65	45	16
VFL-7260	417	200	100	70	36
VFL-7270	517	250	133	95	56

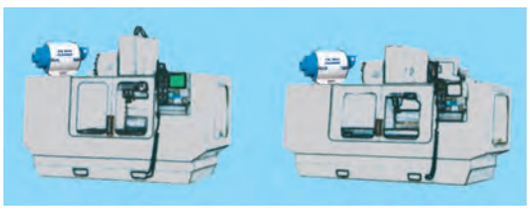
ORDER NO.	Six workpiece	Seven workpieces	Eight workpieces	Nine workpieces	Ten workpieces	Eleven workpieces
VFL-5030	--	--	--	--	--	--
VFL-5040	17	--	--	--	--	--
VFL-5050	34	19	15	--	--	--
VFL-5060	50	33	28	17	14	--
VFL-7240	--	--	--	--	--	--
VFL-7250	--	--	--	--	--	--
VFL-7260	27	--	--	--	--	--
VFL-7270	44	23	18	--	--	--

Oil Mist Cleaner

NEW



NC,CNC lathe, machining center, grinding machine, cleaning machine, NC milling machine, automatic press, universal lathe, drilling machine, broaching machine, transfer machine, gun drill, etc.



FEATURES

- Various types of mists can cause people to have headaches or chapped skin, and can also make the skin sticky when it adheres to the skin.
- When mists adhere to the floor, they can make it slippery,causing falls and other secondary accidents.
- Work environments filled with mists cause workers to work less hard, reducing productivity.
- Systems which remove mists to outside the building result in environmental damage. In addition, the effects of heating / cooling systems is reduced, resulting in higher air conditioning costs.
- The presence of mist may cause the electrical systems within manufacturing machinery to malfunction.
- Small size and light weight (compared to our conventional product)

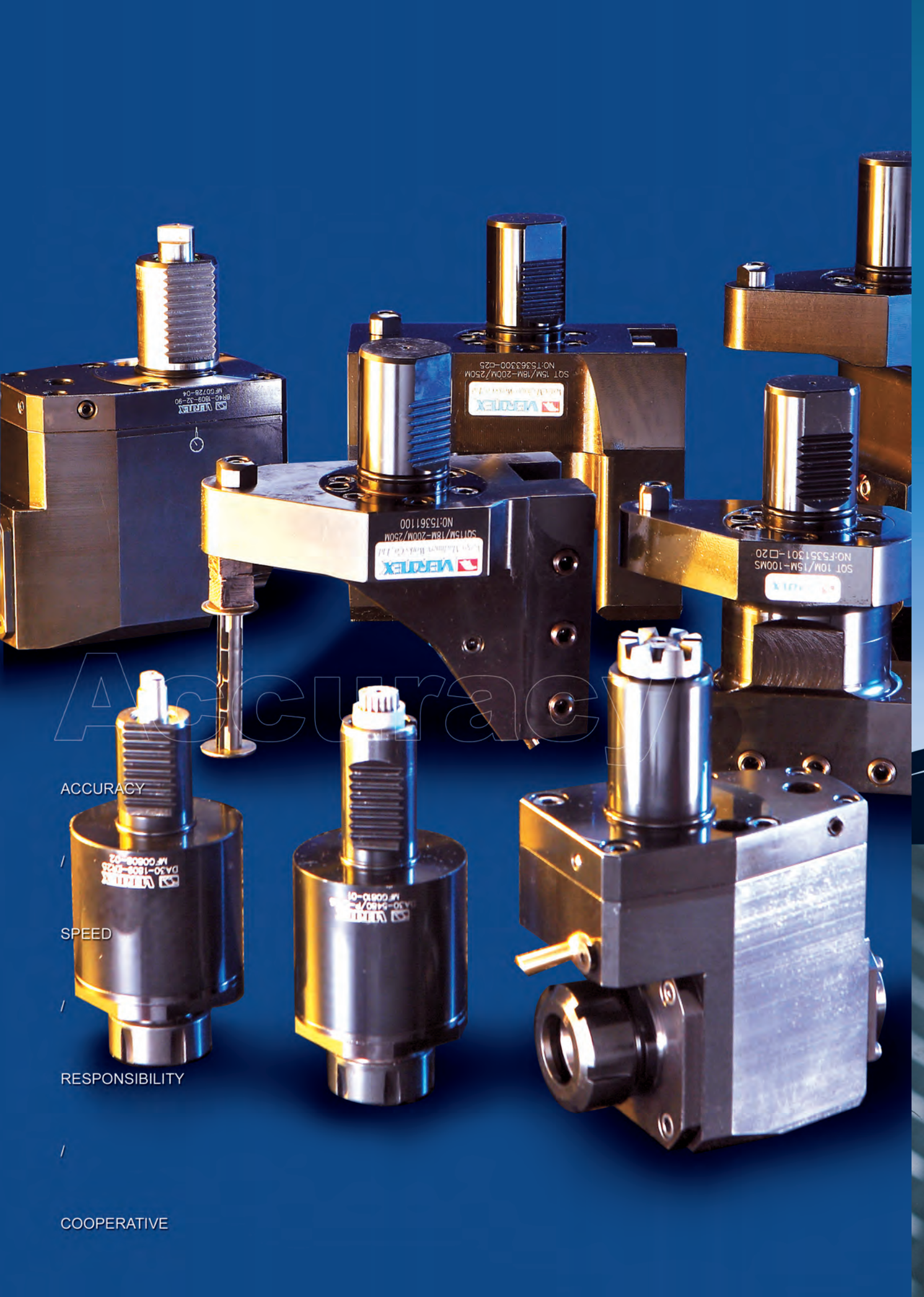
DIMEMSIONS

ORDER NO.	VOM-30	VOM-35	VOM-45
POWER SOURSE	3ø220v / 380v / 440v (50/60HZ)		
R.P.M	3,450		
AMP	1.7/1.0/0.8	3.5/2.0/1.6	6.5/3.7/3.3
WIND CAPACITY	5	10	20
mmAq	70	100	150
MOTOR	0.4	0.75	1.5
INLET&OUTLET(Ø)	98/98	123/123	148/148
G.W(kg)	32	40	75

STANDARD PARTS	OPTION PARTS
1.DRAIN HOSE : 2m 2.FLANGE : 1EA	1.AFTER FILTER

unit: mm

ORDER NO.	A	B	C	D	E	F	G	H	I	J	CODE NO.
VOM-30	295	380	180	226	210	240	Ø98	320	650	200	4007-100
VOM-35	340	420	180	226	210	240	Ø123	370	730	225	4007-101
VOM-45	445	545	280	320	360	400	Ø148	480	890	210	4007-102



ACCURACY

/

SPEED

/

RESPONSIBILITY

/

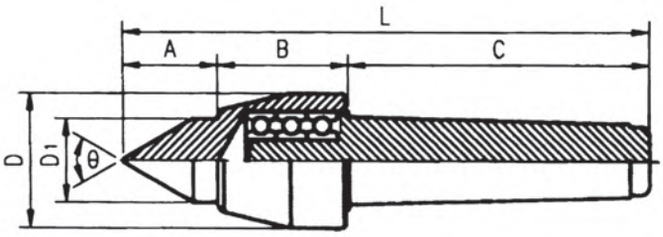
COOPERATIVE

E1~E5	LIVE CENTER
E6~E16	2/3/4 JAW CHUCKS / SOFT/HARD JAW
E17~E19	SUPER HIGH SPEED THROUGH-HOLE ROTARY HYDRAULIC CYLINDER
E20	2/3/6 JAW CHUCKS
E21~E22	TOOL POST GRINDER
E23~E60	VDI TOOL HOLDERS SERIES
E61~E64	QUICK CHANGE TOOL POST & HOLDERS

LATHE MACHINE ACCESSORIES

VERTEX®

Light Duty Live Center



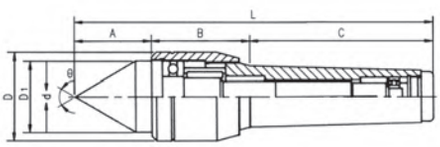
- Center is made of alloy steel under heating treatment to provide higher rigidity (HRC60°±2°) and satisfied wear-resistance.
- Center is constituted by ball bearings assembly.
- Applicable to middle-speed & high-speed lathe with light load.

Unit:mm

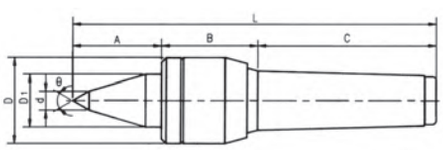
ORDER NO.	A	B	C	D	D1	L	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VPC-MT1	21	31	56	32	16	108	0.005	3200	60°	0.3	115 x 136 x 38	5001-001
VPC-MT2	26	37	69	40	22	132	0.005	2800	60°	0.5	140 x 45 x 45	5001-002
VPC-MT3	32	46	86	45	26	164	0.005	2000	60°	0.9	170 x 50 x 52	5001-003
VPC-MT4	34	46	108	48	30	188	0.005	1800	60°	1.3	195 x 58 x 56	5001-004
VPC-MT5	50	62	136	68	45	248	0.005	1500	60°	3.2	268 x 86 x 77	5001-005

Live Lathe Center

A TYPE



B TYPE



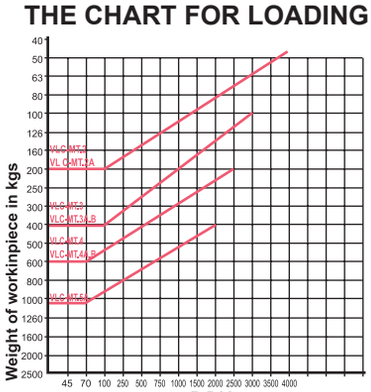
- Center shaft & main body are made of alloy steel under heating treatment to provide higher rigidity (HRC60°±2°) and satisfied wear- resistance.
- Center is constituted by thrust ball bearing, needle roller bearings & ball bearings assembly.
- Applicable to middle-speed & high- speed lathe with heavy load.

※ B TYPE SUITABLE FOR SMALL -WORKPIECE MACHINING.

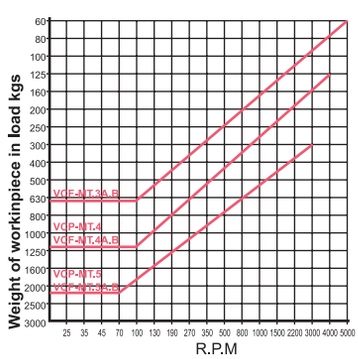
Unit:mm

ORDER NO.	TYPE	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VLC-212	MT2A	28	35	69	32	23	-	132	-	0.005	4000	60°	0.3	173 x 43 x 40	5001-010
VLC-213	MT3A	36	44	86	41	35	-	166	-	0.005	3000	60°	0.9	198 x 67 x 51	5001-011
VLC-214	MT4A	41	51	108	47	40	-	200	12	0.005	2500	60°	1.5	240 x 70 x 61	5001-012
VLC-215	MT5A	54	72	136	65	52	-	262	18	0.005	2000	60°	3.8	290 x 92 x 80	5001-013
VLC-213B	MT3B	46	44	86	41	25	10	176	-	0.005	3000	60°	0.9	198 x 67 x 51	5001-014
VLC-214B	MT4B	55	51	108	47	32	12	214	12	0.005	2500	60°	1.5	240 x 70 x 61	5001-015

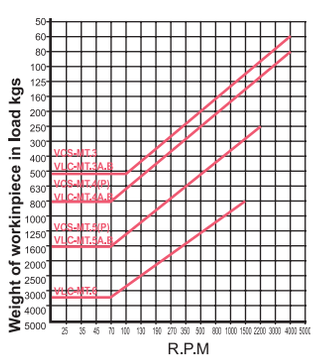
THE CHART FOR LOADING WEIGHT WITH R.P.M.



FOR VLC-TYPE



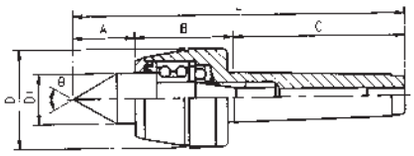
FOR VCF/VCP-TYPE



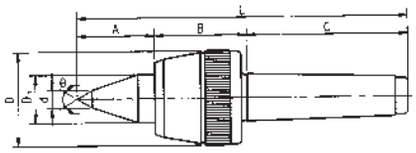
FOR VCS-TYPE

High-Speed NC Live Center

A TYPE



B TYPE



WATER-PROOF TYPE

- Center shaft is made of SKS3 material under vacuum heating tretment to provide higher rigidity (HRC60º±2º) and satisfied wear-resistance.
- Center is constituted by dual ball bearing. Thrust bearing & needle roller bearing assembly.
- Applicable to high-speed lathe & NC lathe with heavy load water-proof.

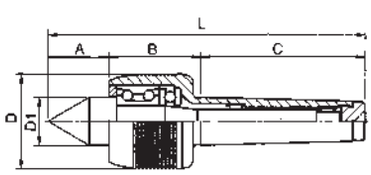
※ B Type is applicable in the metal workings on small workpieces.

Unit:mm

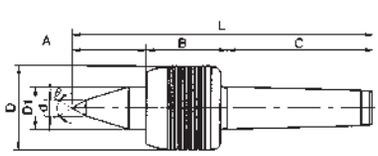
ORDER NO.	TYPE	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VLC-MT3A	MT3A	39	55	86	53	30	-	180	12	0.005	4000	60º	1.3	240 x 70 x 61	5001-020
VLC-MT4A	MT4A	42	62	108	63	32	-	212	12	0.005	3000	60º	2.2	253 x 92 x 80	5001-021
VLC-MT5A	MT5A	57	71	136	83	40	-	264	18	0.005	2500	60º	4.5	303 x 108 x 101	5001-022
VLC-MT6A	MT6A	80	115	139	128	70	-	384	-	0.008	1500	60º	15.6	410 x 177 x 168	5001-023
VLC-MT3B	MT3B	45	55	86	53	30	10	186	12	0.005	4000	60º	1.4	240 x 70 x 61	5001-024
VLC-MT4B	MT4B	52	62	108	63	32	12	222	12	0.005	3000	60º	2.2	253 x 92 x 80	5001-025
VLC-MT5B	MT5B	67	71	136	83	40	14	274	18	0.005	2500	60º	4.5	303 x 108 x 101	5001-026

High-Load NC Live Center

A TYPE



B TYPE



- Shaft uses material SKD11: through vacuum heat treatment, it is even more durale, hardness is as high as (HRC60º± 2º) and satisfied wear-resistance. Main body is made of SCM21 material.
- Front end is constituted by SKF angular contact ball bearing & thrust ball bearing. middle & rear ends are comprised of needle roller bearing assembly.
- These centers are suitable for NC lathe at high-speed & heavy-load operation, water-proof.

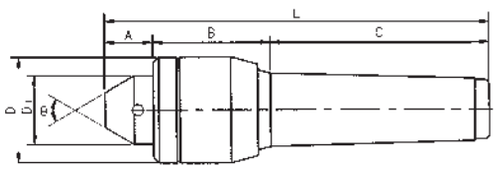
※ B Type is applicable in the metal workings on small workpieces.

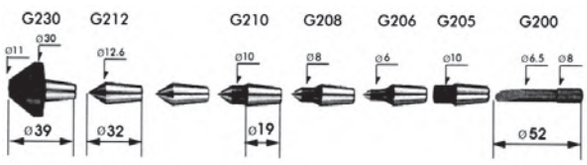
Unit:mm

ORDER NO.	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VCF-MT3A	38	50	86	53	30	-	174	12	0.003	5000	60º	1.3	240 x 70 x 61	5001-030
VCF-MT4A	45	60	108	68	32	-	213	12	0.003	4500	60º	2.4	253 x 92 x 80	5001-031
VCF-MT5A	52	70	136	87	40	-	258	18	0.003	3000	60º	5	303 x 108 x 101	5001-032
VCF-MT3B	52	50	86	53	25	10	188	12	0.003	5000	60º	1.3	240 x 70 x 61	5001-033
VCF-MT4B	55	60	108	68	32	12	223	12	0.003	4500	60º	2.4	253 x 92 x 80	5001-034
VCF-MT5B	67	70	136	87	40	14	273	18	0.003	3000	60º	5	303 x 108 x 101	5001-035

Inter-changeable Points Live Center

- Complete set with 7 Interchangeable Points for various processing.
- Packed in plastic case.
- Accurating high accurancy and durability as well as complete rust-proof performance
- Body mabe of SCM-4 special tool steel hardened and ground can be used for heavy duty work.





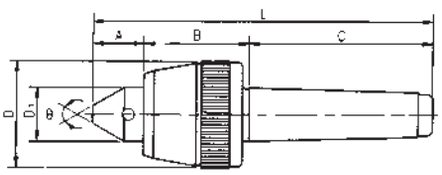
Unit:mm

ORDER NO.	TYPE	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VLC-312	MT2	22	36	69	32	25	-	127	-	0.008	4000	60°	0.9	166 x 105 x 63	5001-040
VLC-313	MT3	23	44	86	41	30	-	153	-	0.008	3000	60°	1.4	255 x 138 x 100	5001-041
VLC-314	MT4	23	51	108	47	32	-	182	-	0.008	2500	60°	2	255 x 138 x 100	5001-042

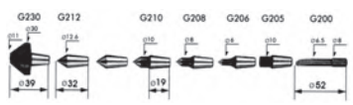
High Speed NC Interchangeable Points Live Center

Water-Proof Type

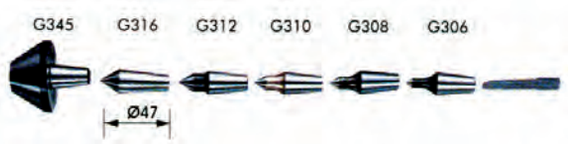
- Center shaft is made of SKS3 material under vacuum heating treatment to provide higher rigidity (HRC60°±2°) and satisfied wear-resistance.
- Center is constituted by dual ball bearing. Thrust bearing & needle roller bearing assembly.
- Applicable to high-speed lathe & NC leathe with heavy load, water-proof.



VCS-MT3, MT4



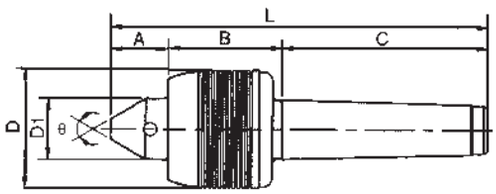
VCS-MT4P, MT5P



Unit:mm

ORDER NO.	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VCS-MT3	28	55	86	53	30	-	167	-	0.008	4000	60°	1.8	255 x 138 x 100	5001-050
VCS-MT4	30	62	108	63	32	-	196	-	0.008	3500	60°	2.5	255 x 138 x 100	5001-051
VCS-MT4P	30	62	108	63	32	-	196	-	0.008	3500	60°	2.7	235 x 130 x 80	5001-052
VCS-MT5P	34	71	136	83	40	-	237	-	0.008	2500	60°	5.1	275 x 147 x 97	5001-053

High Load Interchangeable Points Live Center

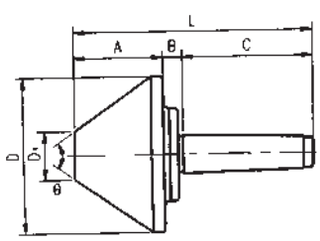


- Shaft uses material SKD11:through vacuum heat treatment, it is even more durable, hardness is as high as (HRC60°±2°) and satisfied wear-resistance. Main body is made of SCM21 material.
- Front end is constituted by skf angular contact ball bearing & thrust ball bearing. middle & rear ends are comprised of needle roller bearing assembly.
- These centers are suitable for NC lathe at high-speed & heavy-load operation, water-proof.

Unit:mm

ORDER NO.	A	B	C	D	D1	b	L	d1	Accuracy	Speed Max R.P.M.	θ	G.W. weight kgs	PACKING LxWxH	CODE NO.
VCP-MT4	35	60	108	68	32	-	203	-	0.005	4500	60°	3	253 x 130 x 80	5001-060
VCP-MT5	37	70	136	87	40	-	243	-	0.005	3000	60°	5.5	275 x 147 x 97	5001-061

Bull Nose Center



HARDEN PROCESS : HRC50°
CONCENTRICITY : 0.005mm
ROUNDNESS : 0.005mm
MATERIAL : STEEL

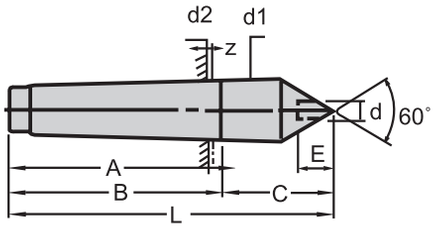
Unit:mm

ORDER NO.	SIZE	A	C	D	D1	L	Speed Max R.P.M.	R.P.M.100 LOAD WEIGHT (KGS)	G.W. weight (KGS)	CODE NO.
VLC-433	MT3x3″	52	86	78	15	156	3300	400	1.6	5001-070
VLC-434	MT3x4″	59	86	106	25	161	3000	500	2.8	5001-071
VLC-443	MT4x3″	52	108	78	15	178	3300	400	1.8	5001-072
VLC-444	MT4x4″	59	108	106	25	183	3000	500	3.1	5001-073
VLC-445	MT4x5″	73	108	128	40	193	2000	650	4.9	5001-074

Unit:mm

ORDER NO.	SIZE	A	C	D	D1	L	Speed Max R.P.M.	R.P.M.100 LOAD WEIGHT (KGS)	G.W. weight (KGS)	CODE NO.
VLC-446	MT4x6″	88	108	156	45	208	1900	800	7.7	5001-075
VLC-448	MT4x8″	98	108	206	81	218	1500	1300	15.4	5001-076
VLC-455	MT5x5″	73	136	128	40	221	2000	650	5.8	5001-077
VLC-456	MT5x6″	88	136	156	45	236	1900	800	8.6	5001-078
VLC-458	MT5x8″	98	136	206	81	246	1500	1600	15.7	5001-079

Lathe Centers



- Carbide tipped-HRC 70º
- Hardened & precision ground.
- Concentricity within.0002″(0.005mm)

Unit:mm

ORDER NO.	SIZE	L	A	B	C	E	d2	d1	d	WEIGHT (KGS)	CODE NO.
VLC-112	MT-2	100	69	67	31	8	17.780	18.0	6	0.2	5001-090
VLC-113	MT-3	125	89	81	39	10	23.825	24.1	8	0.4	5001-091
VLC-114	MT-4	155	109	102.5	46	14	31.267	31.6	10	0.8	5001-092
VLC-115	MT-5	200	136	129.5	64	18	44.399	44.7	14	2.1	5001-093
VLC-116	MT-6	270	190	182	80	30	63.648	63.8	18	5.7	5001-094

Work-Driving Center

VDK-15

VDK-23

VDK-32

- This Clamp-free center is comprised of excellent mechanical structure, nearly free of breakdown. main body & center shaft are made of SLD material under heating treatment(HRC62º).
- Driving is required for traditional lathe machining to prevent workpiece from stop. This clamp-free center with 6 T & 8T design on end surface is able to securely support workpiece surface to fulfill easy and rapid machining.

Unit:mm

ORDER NO.	Center Shaft Size	Outer Dia	Working Range	Weight (KGS)	CODE NO.
VDK-15-MT4	6ø	16ø	16ø-25ø	0.6	5001-100
VDK-23-MT4	8ø	23ø	23ø-32ø	0.7	5001-101
VDK-32-MT4	8ø	32ø	32ø-45ø	0.7	5001-102

Work-Driving Center-Changable Tips

SET STYLE

TAPER SLEEVE

STOPPER

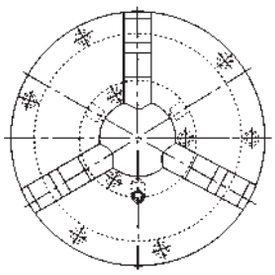
CENTER

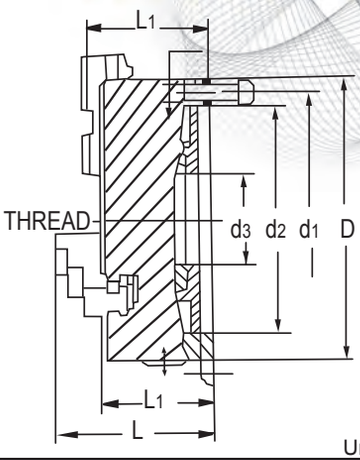
Unit:mm

ORDER NO.	Center Shaft Size	Stopper Outer Dia	Working Range	Weight (KGS)	CODE NO.
VDC-30-MT4	6ø, 8ø, 10ø	16ø, 23ø, 30ø	15ø-45ø	0.23	5001-106

3 Jaw Self Centering Chuck

2 Set of Solid Jaw. Plain Back





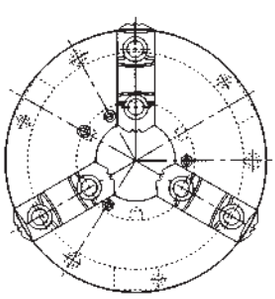
SPECIFICATIONS

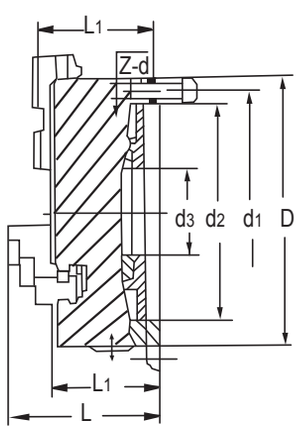
Unit:mm

ORDER NO.	D-Size	d1	d2	d3	L	L1	h	THREAD	WEIGHT (kgs)	CODE NO.
VSC-3A	80mm(3″)	66	55	16	66	50	3.5	3-M6	2	5002-020A
VSC-4A	100mm(4″)	84	72	22	74.5	55	3.5	3-M8	3.3	5002-021A
VSC-5A	130mm(5″)	115	100	33	78	55	3.5	3-M8	5.8	5002-022A
VSC-6A	160mm(6″)	145	130	40	95	65	5	3-M8	9	5002-023A
VSC-7A	190mm(7 1/2″)	172	155	55	105	75	5	3-M10	15.1	5002-024A
VSC-8A	200mm(8″)	180	165	70	109	75	5	3-M10	15.6	5002-025A
VSC-9A	240mm(9 1/2″)	215	195	70	122.5	80	10	3-M12	26	5002-026A
VSC-10A	250mm(10″)	225	206	80	120	80	5	3-M12	26.5	5002-027A
VSC-12A	315mm(12″)	285	260	100	147.5	90	6	3-M16	47	5002-028A
VSC-16A	400mm(16″)	368	340	130	173.5	100	6	3-M16	73	5002-029A
VSC-20A	500mm(20″)	465	440	210	202	115	6	6-M16	121	5002-030A
VSC-25A	630mm(25″)	586	545	252	220.5	135	7	6-M16	200	5002-031A

3 Jaw Powerful Self Centering Chuck

Reversible Top Jaws. Plain Back





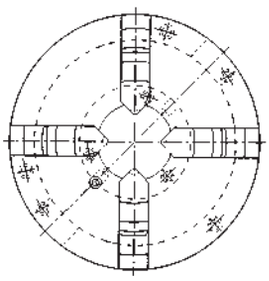
3 JAW SELF CENTERING CHUCK REVERSIBLE TOP JAWS. PLAIN BACK

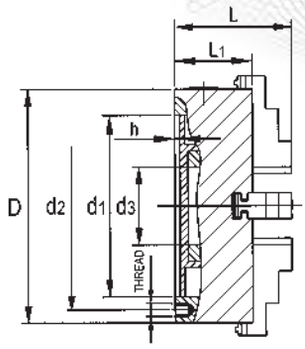
SPECIFICATIONS

Unit:mm

ORDER NO.	D-Size	d1	d2	d3	L	L1	THREAD	WEIGHT (kgs)	CODE NO.
VSK-6A	160mm(6″)	142	130	45	95	71	3-M8	8.3	5002-040A
VSK-7A	190mm(7 1/2″)	172	155	55	105	75	3-M10	10	5002-041A
VSK-8A	200mm(8″)	180	165	65	109	78	3-M12	16	5002-042A
VSK-10A	250mm(10″)	226	206	80	120	84	3-M12	21.7	5002-043A
VSK-12A	315mm(12″)	285	260	100	156.5	90	3-M16	41	5002-043B
VSK-13A	325mm(13″)	296	272	100	154.5	102.5	3-M16	45.8	5002-044A
VSK-15A	380mm(15″)	350	325	130	156.5	104.5	3-M16	64.7	5002-045A
VSK-16A	400mm(16″)	368	340	130	181.5	129.5	3-M16	75.5	5002-046A

4 Jaw Self Centering Chucks



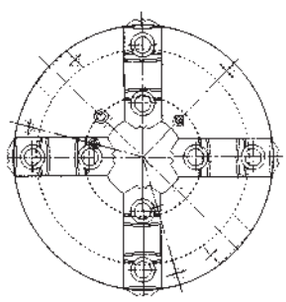


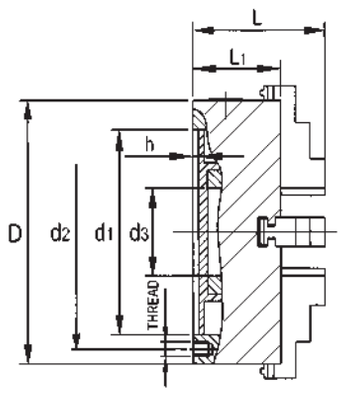
SPECIFICATIONS

Unit:mm

ORDER NO.	D	d1	d2	d3	L	L1	h	THREAD	WEIGHT (kgs)	CODE NO.
VPS-6A	165	130	145	45	94	65	5	3-M8	9.3	5002-050
VPS-7A	190	155	172	55	105	75	5	3-M10	13.8	5002-051
VPS-8A	200	165	180	65	109	75	5	3-M10	16.6	5002-052
VPS-10A	250	206	226	80	120	80	5	3-M12	28	5002-053
VPS-12A	315	260	285	100	147.5	90	6	3-M16	54	5002-054

4 Jaw Self Centering Chucks (2-Pices Jaw)





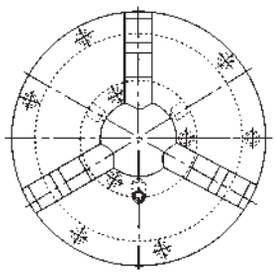
SPECIFICATIONS

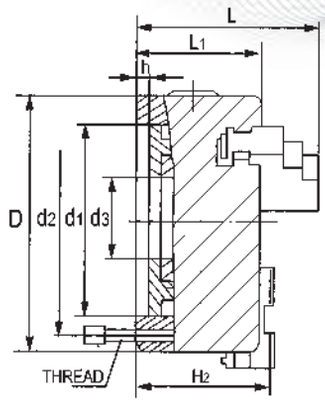
Unit:mm

ORDER NO.	D	d1	d2	d3	L	L1	h	THREAD	WEIGHT (kgs)	CODE NO.
VPS-6AK	165	130	145	45	109	65	5	3-M8	9.5	5002-055
VPS-8AK	200	165	180	65	122	75	5	3-M10	14.8	5002-057
VPS-10AK	250	206	226	80	136	80	5	3-M12	24.7	5002-058
VPS-12AK	315	260	285	100	156.5	90	6	3-M16	45.7	5002-059

DIN-Type 3-Jaw Self-Centering Chucks

DIN 6350 Standard





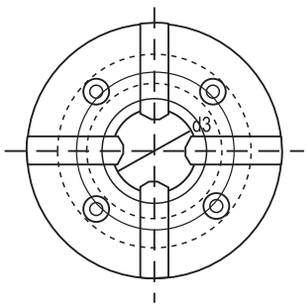
It have front mounting type as well.

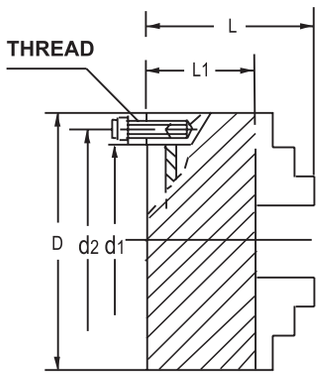
SPECIFICATIONS

Unit:mm

ORDER NO.	D	d1	d2	d3	L	L1	h	THREAD	R.P.M. MAX SPEED	WEIGHT (kgs)	CODE NO.
VSC-3D	80	56	67	16	66.5	50	4	3-M6	4000	1.9	5002-215
VSC-4D	100	70	83	22	74.5	55	3	3-M8	3500	3.3	5002-216
VSC-5D	125	95	108	30	84.5	58	4	3-M8	3000	5.2	5002-217
VSC-6D	160	125	140	45	94	65	5	6-M10	2500	9.1	5002-218
VSC-8D	200	160	176	65	109	75	5	6-M10	2500	16	5002-219
VSC-10D	250	200	224	80	120	80	5	6-M12	1600	27.5	5002-219A

4-Jaw Independent Chuck Plain Back



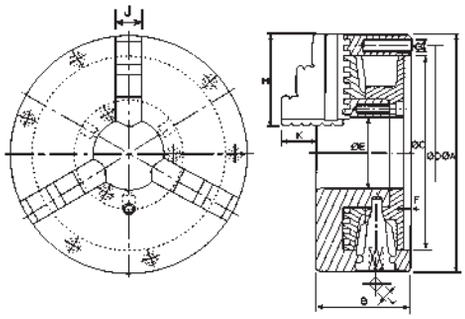


SPECIFICATIONS

Unit:mm

ORDER NO.	D-size	d1	d2	d3	L	L1	h	THREAD	WEIGHT (kgs)	CODE NO.
VKC-4	100mm(4″)	72	84	25	74	54	4.5	4-M8	4	5002-220
VKC-5	125mm(5″)	95	108	30	78	56			5.1	5002-221
VKC-6	160mm(6″)	65	95	45	93	65	5	4-M10	8.3	5002-222
VKC-8	200mm(8″)	75		56	107	75	6		15.9	5002-223
VKC-10	250mm(10″)	110	130	65	120	80		4-M12	21.8	5002-224
VKC-12B	320mm(12″)	140	165	95	134	90		4-M16	43.8	5002-226
VKC-14	350mm(14″)	130	168						53.6	5002-227
VKC-16	400mm(16″)	160	185	125	143	95	8		65	5002-228
VKC-20	500mm(21″)	200	236	160	161	106		4-M20	105	5002-229
VKC-25	630mm(25″)	220	258	180	180	118	10		175	5002-230
VKC-32	800mm(32″)	250	300	210	202	132	12	8-M20	300	5002-231

3-Jaw Scroll Chuck



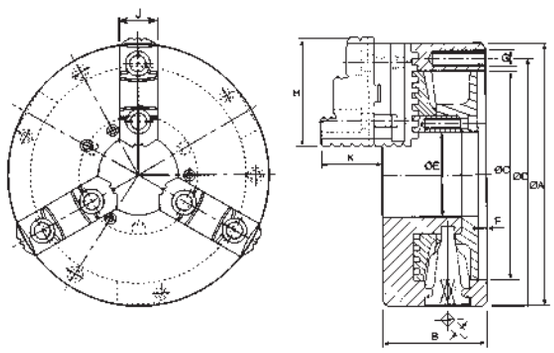
- Interchangable utilization of internal and external hard jaws.
- VSC types feature economical and durable,suitable for mass production.
- Gripping accuracy of 0.03mm (0.012inch)T.I.R..
- The body is made of MEEHANITE. It is suitably used for high speed revolution and 3 times more durable than regular chucks.

SPECIFICATIONS

Unit:mm

Dim / ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	Allowable Handle Torque (kgf.m)	Gripping Force (kgf)	I (kgf.m²)	Weight (kgs)	Max. Speed (r.p.m.)	Gripping Range		CODE NO.
																	O.D. Range	I.D. Range	
VSC-3	85	46	60	73	16	4	3-M6	36	11	15	7	3.0	900	–	1.9	2500	Ø2-Ø70	Ø24-Ø64	5002-001
VSC-4	112	59	80	95	24	4.5	3-M8	42	14	18	8	4.5	1200	–	3.9	2500	Ø3-Ø90	Ø32-Ø84	5002-002
VSC-5	132	60	100	115	32	4.5	3-M8	50	16	20	8	6.5	1500	0.01	3.9	2500	Ø3-Ø110	Ø35-Ø100	5002-003
VSC-6	165	67	130	147	45	5	3-M10	63	19	27	10	9.0	3300	0.03	9.6	2000	Ø3-Ø160	Ø48-Ø150	5002-004
VSC-7	192	76.5	155	172	58	5	3-M10	77	21.5	28	11	11.0	3600	0.06	14.2	2000	Ø4-Ø180	Ø56-Ø170	5002-005
VSC-8	200	76.5	160	176	58	5	3-M10	77	21.5	38	11	11.0	3600	0.07	15.2	2000	Ø4-Ø180	Ø56-Ø170	5002-006
VSC-9	232	84	190	210	70	6	3-M12	87	24	33	12	15.0	3900	0.15	22.8	2000	Ø5-Ø220	Ø62-Ø210	5002-007
VSC-10	273	87	230	250	87	8.5	3-M12	98	28	37	12	19.5	4800	0.25	30.8	1800	Ø6-Ø260	Ø70-Ø250	5002-008
VSC-12	310	96	260	285	105	7	3-M12	110	30	44	14	21.0	5700	0.58	44.6	1800	Ø10-Ø300	Ø86-Ø290	5002-009
VSC-16	405	122	345	375	145	8.5	6-M14	146	42	56	15	23.0	4500	1.75	102	1500	Ø14-Ø400	Ø100-Ø380	5002-010

3-Jaw Powerful Scroll Chuck



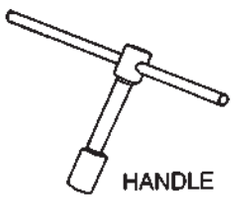
- VSK types chucks have wider unilization range; hard jaws suitable for heavy cutting; soft jaws suitable for light and precision cutting.
- Hard jaws could be used as internal jaws and external jaws.
- Gripping accuracy of 0.03mm (0.012inch) T.I.R.
- The body is made of MEEHANITE. It is suitably used for high speed revolution and 3 times more durable than regular chucks.

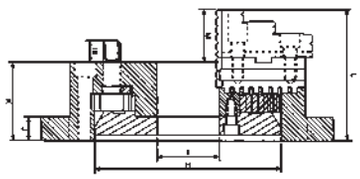
SPECIFICATIONS

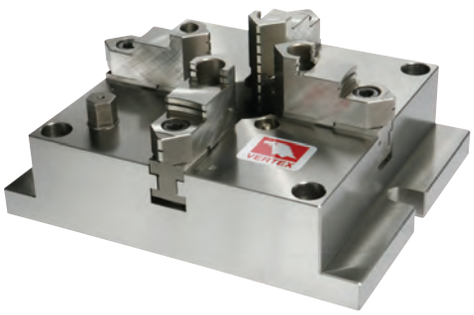
Unit:mm

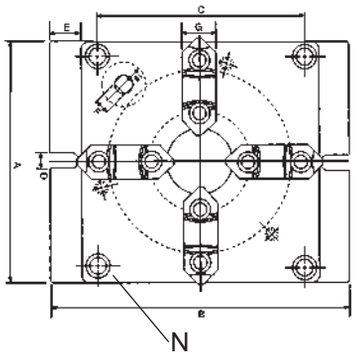
Dim / ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	Allowable Handle Torque (kgf.m)	Gripping Force (kgf)	I (kgf.m²)	Weight (kgs)	Max. Speed (r.p.m.)	Gripping Range		CODE NO.
																	O.D. Range	I.D. Range	
VSK-6	165	67	130	147	45	5	3-M10	72	26	39	10	9.0	3300	0.03	9.5	2000	Ø8-Ø160	Ø55-Ø150	5002-030
VSK-7	192	76.5	155	172	58	5	3-M10	82	28	43	11	11.0	3600	0.06	13.8	2000	Ø8-Ø180	Ø62-Ø170	5002-031
VSK-8	200	76.5	160	176	58	5	3-M10	82	28	43	11	11.0	3600	0.07	14.7	2000	Ø8-Ø180	Ø62-Ø170	5002-032
VSK-9	232	84	190	210	70	6	3-M12	96	32	50	12	15.0	3900	0.16	22.1	2000	Ø11-Ø220	Ø70-Ø210	5002-033
VSK-10	273	87	230	250	87	8.5	3-M12	100	35	50	12	19.5	4800	0.26	29.5	1800	Ø12-Ø260	Ø80-Ø250	5002-034
VSK-12	310	96	260	285	105	7	3-M12	114	40	56	14	21.0	5700	0.58	41.8	1800	Ø15-Ø300	Ø90-Ø290	5002-035
VSK-16	405	122	345	375	145	8.5	6-M14	150	50	75	15	23.0	4500	1.72	98	1500	Ø30-Ø470	Ø110-Ø380	5002-037

Machining Jaw Chuck









- Works are gripped firmly by the formed jaws. ensuring high precision. (Deviation: within 0.03mm)
  * Use forming rings (jaw locks) to form the soft-jaws.
- Large workpieces can be held tight with the low profile vise body.
- Able to grip square works by using this chuck as a two-way jaw unit
  * The fixed jaw(optional)is necessary. Longitudinal works can alse begripped by using the bore of this chuck.
- A dust cover is provided and this keeps the shavings from entering the machine.
- The handle is set on the face and does not interfere with the table. A number of chucks can be used together.

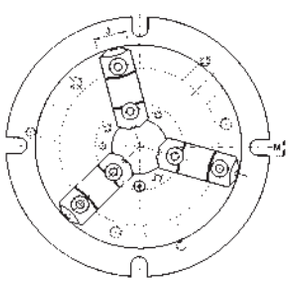
SPECIFICATIONS

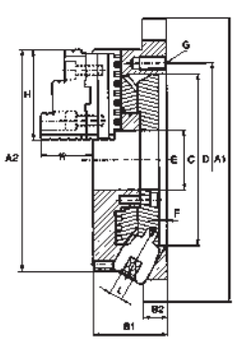
Unit:mm

ORDER NO.	A	B	C	D	E	G	H	I	J	K	L	M	N	MAX. GRIPPING DIAMETER		WEIGHT (kgs)	CODE NO.
														CLAMPING DIA	PROPING DIA		
VMJ-6	165	215	144	18	50	26	130	40	18	57	96	39	4-M10	Ø4-Ø128	Ø55-Ø128	13.5	5002-240
VMJ-8	200	250	174	18	50	28	160	55	20	65	108	43	4-M12	Ø5-Ø162	Ø62-Ø162	21.5	5002-241
VMJ-10	250	310	218	18	60	32	200	70	22	72	122	50	4-M14	Ø6-Ø200	Ø72-Ø200	36.1	5002-242
VMJ-12	310	380	274	22	70	40	260	100	25	85	141	56	4-M16	Ø10-Ø265	Ø90-Ø265	61.7	5002-243

Super Thin Chucks

- The angle between “HANDLE” AND “BASE OF CHUCK” is 30º degree, There Fore, it is much more convenient for “HANDLE” rotation.
- This “POWER SUPER THIN” design of chuck may increase the “allowable length” of machinig operation.
- The flanged type design make it easily for loading and unloading operation.
- “POWERFUL TYPE” design, may be used with hard jaws or soft jaws alternatively.





SPECIFICATIONS

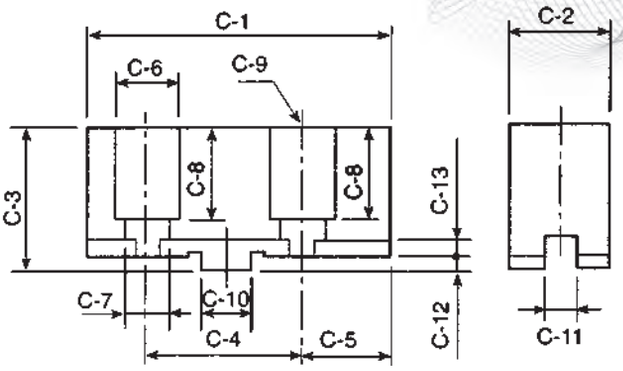
Unit:mm

Dim / ORDER NO.	A1	A2	B1	B2	C	D	E	F	G	H	J	K	L	M	Weight (kgs)	Gripping Range		CODE NO.
																O.D. Range	I.D. Range	
VNBK-6	220	170	58	18	130	147	45	6	3-M10	68	26	40	10	13	12.4	Ø8-160	Ø48-150	5002-070
VNBK-8	270	210	65	20	155	172	60	6	3-M10	85	28	45	11	13	20.2	Ø11-200	Ø62-190	5002-071
VNBK-10	315	255	73	20	190	210	80	6	3-M12	93	32	52	12	16	29.5	Ø12-250	Ø72-240	5002-072
VNBK-12	370	305	80	22	250	285	105	6	3-M12	117	40	59	14	18	46.7	Ø15-300	Ø86-290	5002-073

Soft Jaw For SK-Type Chuck

1.Soft jaw for SK-type chuck. 2.Manufactured in specilfication

3 PCS/SET



Unit:mm

Dim / ORDER NO.	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12	C-13	Weight (kgs)	CODE NO.
VSJ-6	75	26	38	38.1	18	14	8.5	27	M8	12.68	7.94	3	3.5	1.3	5002-300
VSJ-7	95	31	48	44.45	25	17	11	35	M10	12.68	7.94	3	3.5	3.4	5002-301
VSJ-8	95	31	48	44.45	25	17	11	35	M10	12.68	7.94	3	3.5	2.7	5002-302
VSJ-9	110	37	50	53.98	28	19	13	36	M12	19.03	12.7	3	3.5	3.7	5002-303
VSJ-10	110	37	50	53.98	28	19	13	36	M12	19.03	12.7	3	3.5	3.7	5002-304
VSJ-12	125	40	54	63.5	32	19	13	40.5	M12	19.03	12.7	3	3.5	5.3	5002-305
VSJ-16	160	50	70	76.2	42	25	17	48	M16	19.03	12.7	6	5.5	10.6	5002-306

THE SPECIAL OF HEIGHT (C-3) FOR VSJ-TYPE IS AVAILABLE

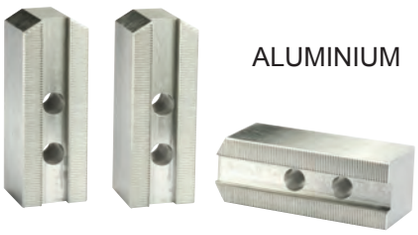
ORDER NO.	MODEL	HEIGHT	CODE NO.
VSJ-6-5	VSJ-6	50H	5002-3005
VSJ-6-6	VSJ-6	60H	5002-3006
VSJ-6-7	VSJ-6	70H	5002-3007
VSJ-6-8	VSJ-6	80H	5002-3008
VSJ-8-5	VSJ-7 VSJ-8	50H	5002-3025
VSJ-8-6	VSJ-7 VSJ-8	60H	5002-3026
VSJ-8-7	VSJ-7 VSJ-8	70H	5002-3027
VSJ-8-8	VSJ-7 VSJ-8	80H	5002-3028
VSJ-9-5	VSJ-9	50H	5002-3035
VSJ-9-6	VSJ-9	60H	5002-3036
VSJ-9-7	VSJ-9	70H	5002-3037
VSJ-9-8	VSJ-9	80H	5002-3038
VSJ-9-9	VSJ-9	90H	5002-3039

ORDER NO.	MODEL	HEIGHT	CODE NO.
VSJ-9-10	VSJ-9	100H	5002-30310
VSJ-10-5	VSJ-10	50H	5002-3045
VSJ-10-6	VSJ-10	60H	5002-3046
VSJ-10-7	VSJ-10	70H	5002-3047
VSJ-10-8	VSJ-10	80H	5002-3048
VSJ-10-9	VSJ-10	90H	5002-3049
VSJ-10-10	VSJ-10	100H	5002-30410
VSJ-12-6	VSJ-12	60H	5002-3056
VSJ-12-7	VSJ-12	70H	5002-3057
VSJ-12-8	VSJ-12	80H	5002-3058
VSJ-12-9	VSJ-12	90H	5002-3059
VSJ-12-10	VSJ-12	100H	5002-30510

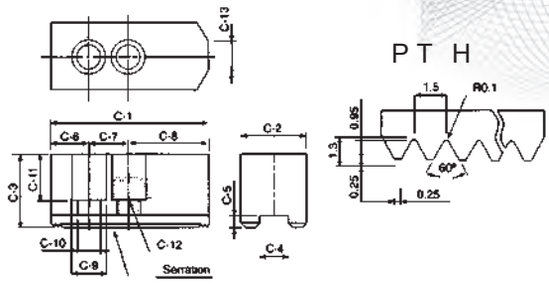
Soft Jaw Hydraulic Power Chucks

Soft jaw for CNC lathe.

STANDARD
3 PCS/SET



ALUMINIUM



MATERIAL: ALUMINIUM

ORDER NO.	SIZE	CODE NO.
VHC-8A	SAME VHC-8	5002-250
VHC-10A	SAME VHC-10	5002-251

MATERIAL: STEEL

Unit:mm

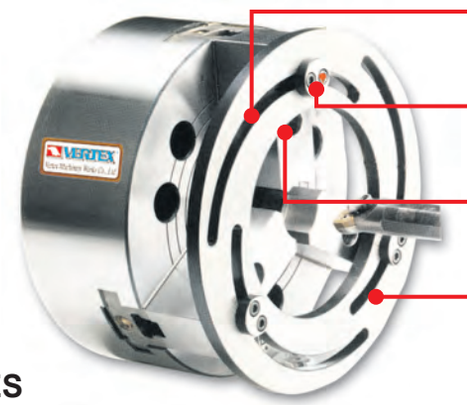
Dim / ORDER NO.	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12	C-13	Weight (kgs)	CODE NO.
VHC-05	62	25	30	10	5	9	14	39	13.5	9	21	M8	5	0.9	5002-330
VHC-06	73	31	36	12	5	15	20	38	17	11	23	M10	14	1.6	5002-331
VHC-08	95	35	37	14	5	24	25	46	19	13	22	M12	16	2.4	5002-332
VHC-10	110	40	42	16	5	30	30	50	19	13	27	M12	18	3.7	5002-333
VHC-12	130	50	50	21	5	39	30	61	25	17	30	M16	23	6.4	5002-334
VHC-15	165	62	62	22	8	37	43	85	32	21	38	M20	-	12.7	5002-335
VHC-12-1	130	50	50	18	5	39	30	61	23	15	30	M14	23	6.25	5002-336
VHC-15-1	165	62	62	25.5	5	37	43	85	32	21	38	M20	-	7.5	5002-337

THE SPECIAL OF HEIGHT (C-3) FOR VHC-TYPE IS AVAILABLE

ORDER NO.	MODEL	HEIGHT	CODE NO.
VHC-05-5	VHC-05	50H	5002-3305
VHC-05-6	VHC-05	60H	5002-3306
VHC-05-7	VHC-05	70H	5002-3307
VHC-05-8	VHC-05	80H	5002-3308
VHC-06-5	VHC-06	50H	5002-3315
VHC-06-6	VHC-06	60H	5002-3316
VHC-06-7	VHC-06	70H	5002-3317
VHC-06-8	VHC-06	80H	5002-3318
VHC-08-5	VHC-08	50H	5002-3325
VHC-08-6	VHC-08	60H	5002-3326
VHC-08-7	VHC-08	70H	5002-3327
VHC-08-8	VHC-08	80H	5002-3328
VHC-10-5	VHC-10	50H	5002-3335
VHC-10-6	VHC-10	60H	5002-3336
VHC-10-7	VHC-10	70H	5002-3337
VHC-10-8	VHC-10	80H	5002-3338

ORDER NO.	MODEL	HEIGHT	CODE NO.
VHC-10-9	VHC-10	90H	5002-3339
VHC-10-10	VHC-10	100H	5002-33310
VHC-12-6A	VHC-12 18SLOT	60H	5002-3366
VHC-12-7A	VHC-12 18SLOT	70H	5002-3367
VHC-12-8A	VHC-12 18SLOT	80H	5002-3368
VHC-12-9A	VHC-12 18SLOT	90H	5002-3369
VHC-12-10A	VHC-12 18SLOT	100H	5002-33610
VHC-12-6	VHC-12 21SLOT	60H	5002-3346
VHC-12-7	VHC-12 21SLOT	70H	5002-3347
VHC-12-8	VHC-12 21SLOT	80H	5002-3348
VHC-12-9	VHC-12 21SLOT	90H	5002-3349
VHC-12-10	VHC-12 21SLOT	100H	5002-33410
VHC-15-7	VHC-15	70H	5002-3357
VHC-15-8	VHC-15	80H	5002-3358
VHC-15-9	VHC-15	90H	5002-3359
VHC-15-10	VHC-15	100H	5002-33510

Soft Jaw Forming Ring



- The size can be adjusted against the helical slot.
- Bias pin can be rotated 180 degree for different size to extend a clamping range.
- Don't need to drill new hole. The hole on the soft jaws can be used directly for bias pin.
- The material, which is hardened and ground, can last for a long time.

FAETURES

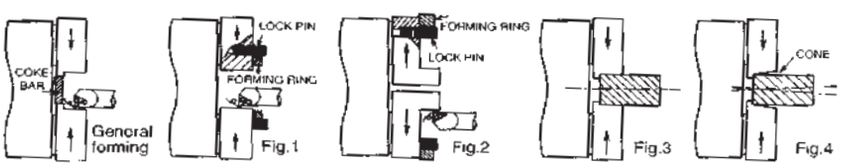
THE CHUCK NOT INCHUDING

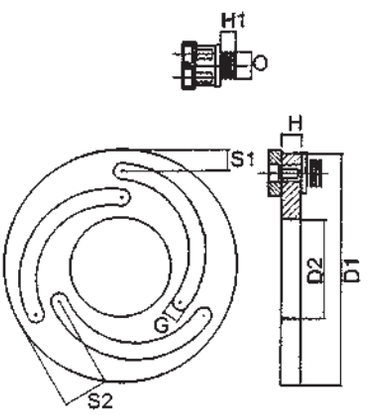
- Forming ring is available for5″ ,6″,8″,10″&12″ power chuck.
- The clamping force is increasing. the roundness and vibration caused by eccentricity can be improved. The cutting accuracy is much better because of no taper hole(as fig.3) and less vibration.
- Both Clamping(as fig.1) and extension (as fig. 2) are available. Meanwhile,the size adjusting is at will, the operation is easy and endurable.
- More improvement for used chuck to have high accuracy & strong clamping force .

INSTRUCTION

Because the forming ring is used for cutting soft jaws by clamping and with extending. through-hole could increase the accuracy of clamping work piece. (please refer to fig.1.2&3)

As fig.4, the soft jaw is made without forming ring. So that the cone has created, moreover, the Bad accuracy, run-out, vibration occur when clamping force is not stable.





ORDER NO.	SUIT TO SK-CHUCK SIZE	H	D1	D2	S1	S2	G	H1	O	KGS	CODE NO.
VFR-05	5″	12	140	60	12	28	10	9	13.5	1	5002-360
VFR-06	6″	12	168	80	12	32	10	9	16.5	1.5	5002-361
VFR-08	8″	12	218	115	17	36	10	9	18.5	2.4	5002-362
VFR-10	10″	12	258	150	15	40	10	9	18.5	3	5002-363
VFR-12	12″	15	316	188	21	50	10	9	21.5	5	5002-364

Hard Jaws For Hydraulic Power Chucks

1.Hard jaw for hydraulic power chucks. 2.Hard jaw for CNC lathe

Fig-1

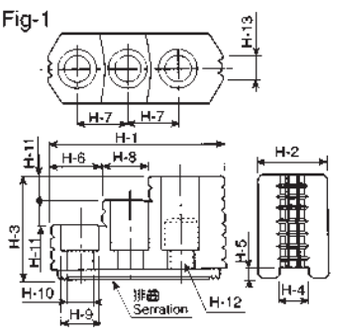
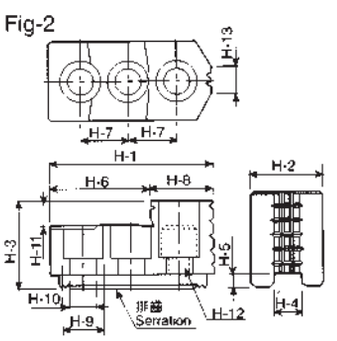


Fig-2



DIMENSIONS

Unit:mm

ORDER NO. \ Dim	H-1	H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	H-11	H-12	H-13	Serration Pitch		Matching Chuck	3-Jaw Weight (kgs)	CODE NO.
HJ05	53	23	27.5	10	4	30.5	14	22.5	13.5	8.5	10	M8	6	1.5x60°	Fig-2	N-205	0.4	5002-401
HJ06	67.5	31	35	12	5	13	20	46	17	11	12	M10	16	1.5x60°	Fig-2	N-206.V-206	1.0	5002-402
HJ08	86	35	51	14	5	31	25	18	19	13	12	M12	12	1.5x60°	Fig-1	N-208.V-208	1.9	5002-403
HJ10	99.5	40	54	16	5	43	30	17	19	13	13	M12	15	1.5x60°	Fig-1	N-210.V-210	2.9	5002-404
HJ12	103	50	52	21	4	62.5	30	40.5	25	17	17	M16	30	1.5x60°	Fig-2	N-212	2.65	5002-405
HJ12-1	103	50	52	18	5	62.5	30	40.5	22	15	17	M14	30	1.5x60°	Fig-2	V-212	2.7	5002-406
HJ15	149	62	86	22	8	63	43	34	32	21	20	M20	40	1.5x60°	Fig-1	N-215	9.6	5002-407
HJ15-1	149	62	86	25.5	5	63	43	34	32	21	20	M20	40	1.5x60°	Fig-1	V-215	9.5	5002-408

3-Jaw Wedge Type Through-hole Power Chuck (Without Adaptor)

Fig-1

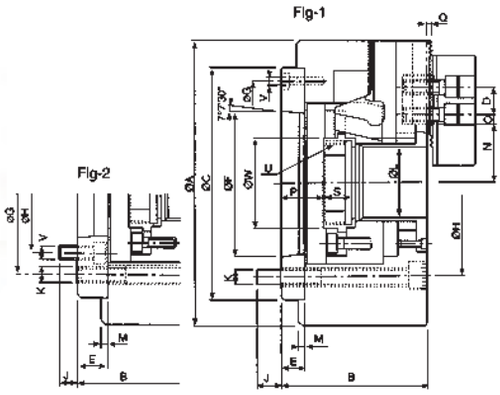
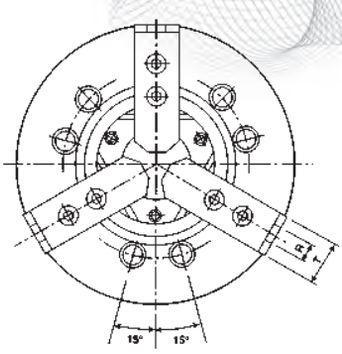


Fig-2



- More large bore:
  Having the largest bore in wede type power operated chucks.
- 20% large bore:
  Approximately 20% higher speed, higher gripping force and larger bore compared with usual chucks.
- Model N-200A chucks are assembled with adaptor for ASA B5.9 type A spindles.
- Model N-200A chucks are manufactured form high grabe alloy steel, All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.

SPECIFICATIONS

Unit:mm

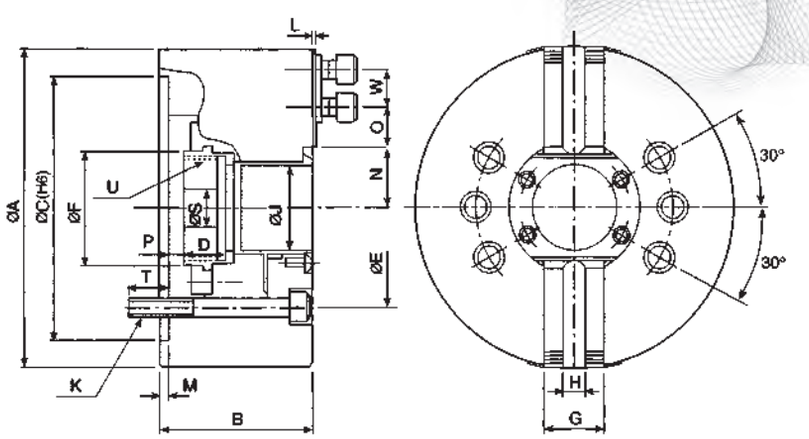
Dim / ORDER NO.	N-205A4	N-206A5	N-208A5	N-208A6	N-210A6	N-210A8	N-212A8	N-215A8	N-215A11
Through-Hole (mm)	ø33	ø45	ø52	ø52	ø75	ø75	ø91	ø117.5	ø117.5
Plunger Stroke (mm)	10	12	16	16	19	19	23	23	23
Jaw Stroke (mm)	5.4	5.5	7.4	7.4	8.8	8.8	10.6	10.6	10.6
Max. Draw Bar Pull Force (kgf)	1700	2200	3400	3400	4300	4300	5500	7240	7240
Max. Gripping Force (kgf)	3600	5700	8800	8800	11000	11000	14300	18355	18355
Max. Operating Pressure (kgt/cm^2)	29.6	28.5	26.5	26.5	27.5	27.5	27.5	23.5	23.5
Max. Speed (r.p.m.)	7000	6000	4900	4900	4200	4200	3300	2500	2500
Weight (kgs)	6.9	14.2	25.8	24.05	40.9	37.4	63.2	134	127
Matching Cylinder	M1036	M1246	M1552	M1552	M1875	M1875	M2091	M2511	M2511
Matching Soft Jaw	VHC05	VHC06	VHC08	VHC08	VHC10	VHC10	VHC12	VHC15	VHC15
Matching Hard Jaw	HJ05	HJ06	HJ08	HJ08	HJ10	HJ10	HJ12	HJ15	HJ15
CODE NO.	5002-080	5002-081	5002-082	5002-083	5002-084	5002-085	5002-086	5002-087	5002-088

DIMENSIONS

Unit:mm

Dim / ORDER NO.	N-205A4	N-206A5	N-208A5	N-208A6	N-210A6	N-210A8	N-212A8	N-215A8	N-215A11
A	135	169	210	201	254	254	304	381	381
B	71	91	109	103	120	113	122	160	149
G	96	116	133.35	150	171.45	190	190	235	260
D	14	20	25	25	30	30	30	43	43
E	15	15	23	17	25	18	18	33	22
F	65.513	82.563	82.563	106.375	106.375	139.719	139.719	139.719	196.869
C	110	140	170	170	220	220	220	300	300
H	82.55	104.78	104.78	133.35	133.35	171.45	171.45	171.45	235
J	15.5	16	13	18	18	24	25	24	28
K	3xM10	6xM10	6xM12	6xM12	6xM16	6xM16	6xM16	6xM20	6xM20
L	33	45	52	52	75	75	91	117.5	117.5
M	4	5	5	5	5	5	6	6	6
N max.	26.5	32	38.7	38.7	51	51	61.3	82	82
N min.	23.8	29.25	35	35	46.6	46.6	56	76.7	76.7
O max.	19.75	22.75	29.75	29.75	33.75	33.75	45.75	46.75	46.75
O min.	7.75	9.25	14.75	14.75	14.25	14.25	15.75	13.75	13.75
P max.	16	26	37.5	31.5	33.5	26.5	26	40	29
P min.	6	14	21.5	15.5	14.5	7.5	3	17	6
Q	2	2	2	2	2	2	2	5	5
R	10	12	14	14	16	16	21	24	24
S	20	19	20.5	20.5	25	25	28	43	43
T	23	32	37	37	42	42	52	62	62
U max.	M40x1.5	M55x2.0	M60x2.0	M60x2.0	M85x2.0	M85x2.0	M100x2.0	M130x2.0	M130x2.0
V	3xM6	3xM6	6xM10	3xM6	6xM12	6xM8	6xM8	6xM16	3xM10
W	45	60	66	66	94	94	108	139	139
REFER FIG.	Fig-1	Fig-1	Fig-2	Fig-1	Fig-2	Fig-1	Fig-1	Fig-2	Fig-1

2-Jaw Wedge Type Through-hole Power Chuck (Without Adaptor)



- All sliding surfaces are hardened and ground for accurate actual running and long service repeatability.
  Lubrication nipple in each base jaw.
- Base jaw:
  1.5mmx60º serrtion.
- Mounting:
  Adaptor mounting to fit with DIN,ISO,BS,ASA B5.9 type A spindles.

SPECIFICATIONS

Unit:mm

Dim \ ORDER NO.	NT205	NT206	NT208	NT210	NT212	NT215
Through-Hole (mm)	Ø33	Ø45	Ø52	Ø75	Ø91	Ø117.5
Plunger Stroke (mm)	10	12	16	19	23	23
Jaw Stroke (mm)	5.4	5.5	7.4	8.8	10.6	10.6
Max. Draw Bar Pull Force (kgf)	1189	1479	2294	2906	3739	4793
Max. Gripping Force (kgf)	2447	3875	5710	7546	9789	12236
Max. Speed (r.p.m.)	7000	6000	4800	4200	3300	2500
Weight (kgs)	5.9	13	22.1	33.2	61.9	115
Matching Cylinder	M1036	M1246	M1552	M1875	M2091	M2511
Max. Operating Pressure (kgt/cm^2)	19.5	18.9	17.3	18.4	18.4	15.3
Matching Soft Jaw	VHC05	VHC06	VHC08	VHC10	VHC12	VHC15
Matching Hard Jaw	HJ05	HJ06	HJ08	HJ10	HJ12	HJ15
CODE NO.	5002-250	5002-251	5002-252	5002-253	5002-254	5002-255

DIMENSIONS

Unit:mm

Dim \ ORDER NO.	NT205	NT206	NT208	NT210	NT212	NT215
A	135	169	210	254	304	381
B	60	81	91	100	110	133
C (H6)	110	140	170	220	220	300
D	20	19	20.5	25	28	43
E	82.55	104.78	133.35	171.45	171.45	235
M	4	5	5	5	6	6
G	23	32	37	42	52	62
H	10	12	14	16	21	24
J	33	45	52	75	91	117.5
K	3-M10	6-M10	6-M12	6-M16	6-M16	6-M20
L	2	2	2	2	2	5
F	45	60	66	94	108	139
N max.	26.5	32	38.7	51	61.3	82
N min.	23.8	29.25	35	46.6	56	76.7
O max.	19.75	22.75	29.75	33.75	45.75	46.75
O min.	7.75	9.25	14.75	14.25	15.75	13.75
P max.	1	11	14.5	8.5	8	7
P min.	-9	-1	-1.5	-10.5	-15	-16
S	12	20	30	45	50	60
T	15.5	16	20	22	23	30
U max.	M40x1.5	M55x2	M60x2	M85x2	M100x2	M130x2
W	14	20	25	30	30	43

3-Jaw Wedge Type Non Through-hole Power Chuck (Without Adaptor)

Fig2

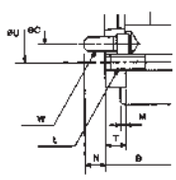
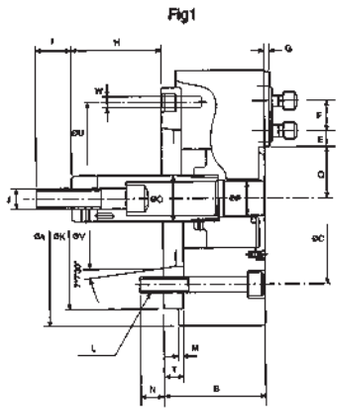
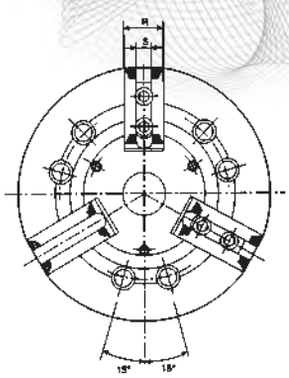


Fig1





- Direct mounting: Direct mount for VA series chucks onto short taper spindle of ASA and JIS standards.
- High performance: Similar high performance to V series.
- Chuck mounting screws: Metric or UNC socket head cap screws are supplied for bolting the chuck to the spindle.
- Alternative spindle adaptors: ASA or DIN adaptors can be supplied to fit machine spindle.

SPECIFICATIONS

Unit:mm

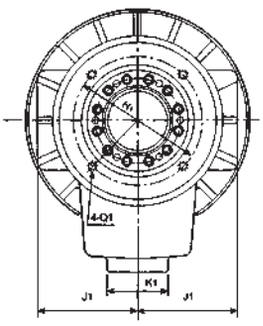
Dim / ORDER NO.	V-206A5	V-208A6	V-210A6	V-210A8	V-212A8	V-215A8	V-215A11
Jaw Stroke (mm)	9.2	9.7	8.8	8.8	10.5	16	16
Plunger Stroke (mm)	20	21	25	25	30	35	35
Max. Pull Force (kgf)	1835	2549	2957	2957	4181	8362	8362
Max. Gripping Force (kgf)	5253	7548	10013	10013	15807	25391	25391
Max. Operating Pressure (kgt/cm^2)	25.5	24.5	28.6	28.6	27.5	30.6	30.6
Max. Speed (r.p.m.)	5000	4000	3500	3500	3000	2800	2800
Weight (kgs)	12.5	24.4	40.65	37.15	61.75	105	103
Moment of Inertia I (kgf.m^2)	0.045	0.317	0.3	0.3	0.725	1.8	1.8
Matching Cylinder	MS105 MH100	MS125 MH125	MS125 MH125	MS125 MH125	MS150 MH150	MS150 MH150	MS200 MH200
Matching Soft Jaw	VHC06	VHC08	VHC10	VHC10	VHC12-1	VHC15-1	VHC15-1
Matching Hard Jaw	HJ06	HJ08	HJ10	HJ10	HJ12-1	HJ15-1	HJ15-1
CODE NO.	5002-090	5002-091	5002-092	5002-093	5002-094	5002-095	5002-096

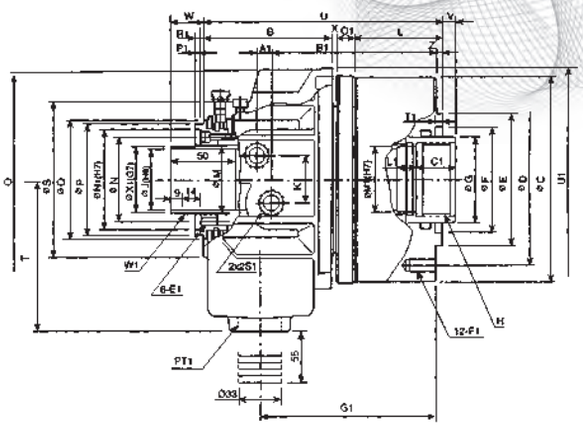
DIMENSIONS

Unit:mm

Dim / ORDER NO.	V-206A5	V-208A5	V-208A6	V-210A6	V-210A8	V-212A8	V-215A8	V-215A11
A	165	210	210	254	254	304	381	381
B	84	103	97	109	102	118	141	130
C	104.78	104.78	133.35	133.35	171.45	171.45	171.45	235
F	20	25	25	30	30	30	43	43
K	140	170	170	220	220	220	300	300
L	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M16	6-M20
M	5	5	5	5	5	6	6	6
N	14	13	18	18	25	25	24	32
P	21	21	25	34	34	34	-	-
T	15	23	17	25	18	18	33	22
V	82.563	82.563	106.375	106.375	139.719	139.719	139.719	196.869
U	116	133.35	150	171.45	190	190	235	260
E max.	15.25	22.25	22.25	30.75	30.75	48.75	50.25	50.25
E min.	9.25	11.75	11.75	11.25	11.25	12.75	23.25	23.25
G	4	5	5	5	5	5	2	2
H max.	89.6	109	115	133	140	145	71	82
H min.	69.6	88	94	108	115	115	36	47
I	36	36	36	36	36	36	55	55
J	M16x2.0	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M20x2.5	M30x3.5	M30x3.5
O	34	38	38	45	45	50	60	60
Q max.	38.7	46.75	46.3	51.1	51.1	61	77.5	77.5
Q min.	34.1	41.9	41.9	46.7	46.7	55.75	69.5	69.5
R	31	35	35	40	40	50	50	50
S	12	14	14	16	16	18	25.5	25.5
W	3-M6	6-M10	3-M6	6-M12	6-M8	6-M8	6-M16	3-M10
REFER FIG.	Fig-1	Fig-2	Fig-1	Fig-2	Fig-1	Fig-1	Fig-2	Fig-1

Super High Speed Through Hole Rotary Hydraulic Cylinder





- Small-sized light weight:
  Comparing with the traditional product, it is small-sized (reduced to MAX 95mm)and a light weight (weighted MAX 4.5kgs). Make its capacity more slable to reduce the burden of the machinery at high speed turning.
- The most largest bore:
  Comparing with the old product, it has about 20% more bore full diameter for utilizing the capacity of machinery.
- The safety mechanism:
  It can retain the gripping force with a check valve.

SPECIFICATIONS

Dim / ORDER NO.	Piston Dia. (mm)	Piston Area		Piston Stroke (mm)	Max. Draw Bar Pull Force		Max. Operating Pressure (kgf/cm²)	Max. Speed (r.p.m.)	Moment Inertia I (kgf.m²)	Weight (kgs)	Total Leakage (l/min)	CODE NO.
		Push Side (cm²)	Pull Side (cm²)		Push Side KN (kgs)	Pull Side KN (kgs)						
M1036	105	71	68.5	15	24.8(2529)	24(2447)	40.8	8000	0.011	8.6	3.0	5003-001
M1236	125	100	89	15	38(3875)	33(3365)	40.8	7000	0.019	13.0	3.0	5003-002
M1246	125	100	89	15	38(3875)	33(3365)	40.8	7000	0.019	12.0	3.0	5003-003
M1546	155	161	150	22	60(6118)	56(5710)	40.8	6200	0.052	18	3.9	5003-004
M1552	155	161	150	22	60(6118)	56(5710)	40.8	6200	0.052	16.8	3.9	5003-005
M1868	180	198	183	25	75(7546)	69(7036)	40.8	4700	0.095	28.0	4.2	5003-006
M1875	180	198	183	25	75(7546)	69(7036)	40.8	4700	0.095	26.0	4.2	5003-007
M2091	205	252	234	30	94(9585)	88(8973)	40.8	3800	0.15	37.0	4.5	5003-008
M2511	250	348	336	23	124(12644)	120(12236)	40.8	2800	0.45	57	7.0	5003-009

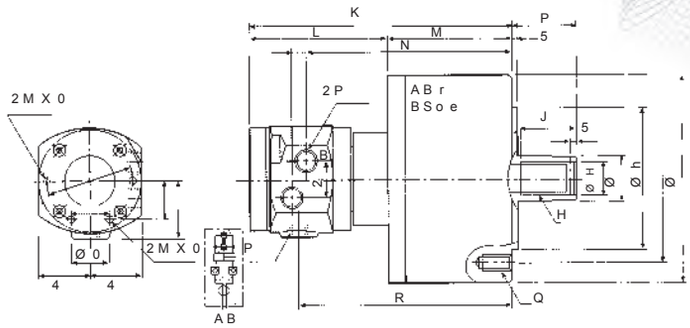
DIMENSIONS

Dim / ORDER NO.	C1	E1	F1	G1	H1	J1	K1	L1	M1	N1	O1	P1	Q1	R1	S1	T1	U1	W1	X1	B	C
M1036	25	M5x0.8	M10x1.5	126	88	68	53	15	38	64	14	4	M5x0.8	4	PT3/8″	6	136	M44x1.5	42	101	136
M1236	30	M6x1.0	M10x1.5	135	98	76	47	15	38	76	14	4	M5x0.8	6	PT1/2″	6	169	M52x1.5	50	99	154.5
M1246	30	M6x1.0	M10x1.5	135	98	76	47	15	50	76	14	4	M5x0.8	6	PT1/2″	6	169	M52x1.5	50	99	154.5
M1546	30	M6x1.0	M10x1.5	145	110	86	47	15	50	85	14	4	M6x1.0	7	PT1/2″	6	187.5	M58x1.5	56	103	190
M1552	30	M6x1.0	M10x1.5	145	110	86	47	15	55	85	14	4	M6x1.0	7	PT1/2″	6	187.5	M58x1.5	56	103	190
M1868	35	M6x1.0	M10x1.5	166.5	155	101	47	15	70	108	16	4	M6x1.0	7	PT1/2″	6	220	M84x2	81	126	215
M1875	35	M6x1.0	M10x1.5	166.5	155	101	47	15	80	108	16	4	M6x1.0	7	PT1/2″	6	220	M84x2	81	126	215
M2091	35	M6x1.0	M12x1.75	183	165	110	47	15	95	120	16	4	M6x1.0	7	PT1/2″	6	267	M99x2	96	141	240
M2511	45	M6x1.0	M16x2.0	197	206	129	55	20	123	160	18	4	M6x1.0	7	PT1/2″	6	294		134.6	186	310

Dim / ORDER NO.	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V max	V mix	W max	W mix	X	Z	A1	B1
M1036	115	100	65	48	M42x1.5	36	32	62	44.6	54	126	73	80	104	115	179.5	10	-5	39	24	2.5	5	11	120.5
M1236	130	100	80	65	M42x1.5	36	36	67	52.6	64	166	85	90	118	114	184	10	-5	40	25	4	5	11	126.5
M1246	130	100	80	65	M55x2	46	36	67	52.6	64	166	85	90	118	114	184	10	-5	40	25	4	5	11	126.5
M1546	170	130	85	70	M55x2	46	36	75	59.6	73	184	96	102	137	130	196	17	-5	47	25	4	5	11	136
M1552	170	130	85	70	M60x2	52	36	75	59.6	73	184	96	102	137	130	196	17	-5	47	25	4	5	11	136
M1868	190	160	120	95	M75x2	68	36	84	84.6	98	215	121	131	166	160	230	20	-5	50	25	4	5	17.5	153.5
M1875	190	160	120	95	M85x2	75	36	84	84.6	98	215	121	131	166	160	230	20	-5	50	25	4	5	17.5	153.5
M2091	215	180	140	110	M100x2	91	36	93	99.6	108	264	138	148	182	185	253	25	-5	55	25	3	5	21	168
M2511	275	230	166	140	M130x2	117.5	36	89	134.6	148	362	178		232	215	296	18	-5	38	15	3	6	27	184.5

Non Through Hole Rotary Hydraulic Cylinder (With Valves)

- Built-in safty check valves.



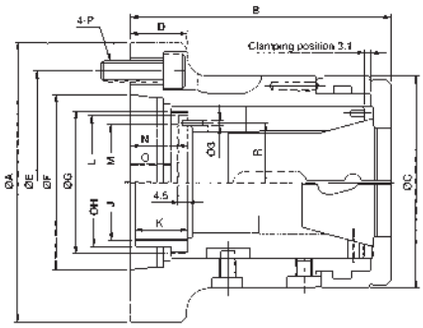
DIMENSIONS

Dim / ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	P Max.	P Min.	Q	R	CODE NO.
MS105	105	20	135	100	80	30	21	M20x2.5	35	197	108	89	152	45	25	6-M10x20	158	5003-030
MS125	125	25	160	130	110	35	25	M24x3.0	44	205	108	97	160	51	26	6-M12x24	166	5003-031
MS150	150	30	190	130	110	45	31	M30x3.5	45	214	108	106	169	56	26	12-M12x24	175	5003-032
MS200	200	35	245	145	120	55	37	M36x4.0	60	228	108	122	183	69	34	12-M16x30	189	5003-033

SPECIFICATIONS

Dim / ORDER NO.	Piston Area		Max. Draw Bar Pull Pull Side KN (kgf)	Piston Stroke (mm)	Max.Speed (r.p.m.)	Max. Operating Pressure (kgf/cm²)	Total Leakage (l/min)	Moment Inertia I (kgf.m²)	Weight (kgs)
	Push Side (cm²)	Pull Side (cm²)							
MS105	86	79	29(2957)	20	6000	4.0(40.8)	0.8	0.0125	7.1
MS125	122	113	42(4283)	25	6000	4.0(40.8)	0.8	0.0225	10
MS150	176	160	60(6118)	30	5500	4.0(40.8)	0.8	0.0475	13.5
MS200	314	290	108(11013)	35	5500	4.0(40.8)	0.8	0.0975	22

Collet Chucks



Please use DIN6343 collets

collet illustration

Spring Collet

Multi-Bore Collet

Holding Range

CHUCK NO.	MULTIBORE CAT NO.	◯	⬡	□	SPRING COLLET CAT NO.	◯	⬡	□
CR42	M-673	42	36	30	173E/4728	42	36	30
CR60	M-677	60	52	42	185E/4291	60	52	42

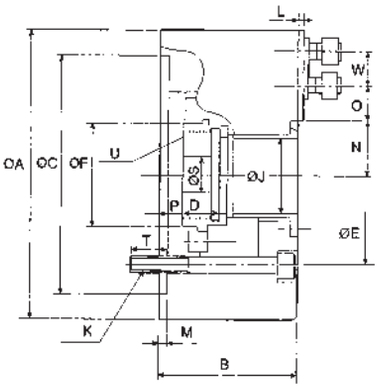
DIMENSIONS

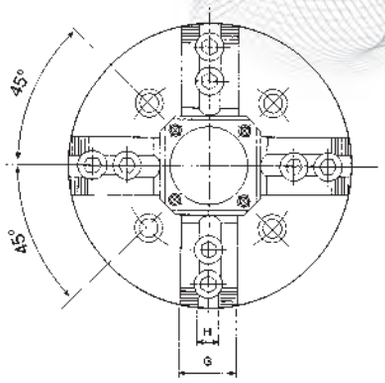
ORDER NO.	A	B	C	D	E	F	G	H	J Max.	K	L	M	N	O	P	R
CR42A5	135	124	100	27	104.78	82.563	M66xP1.5	60	M55xP20	25	62.5	54	27.4	19.4	M10	28
CR42A6	170	124	100	32	133.35	106.375	M66xP1.5	66	M60xP20	25	62.5	54	27.4	19.4	M12	28
CR60A6	170	145	130	27	133.35	106.375	M90xP1.5	67.5	M60xP20	30	83	77	29.9	21.9	M12	39.5

SPECIFICATIONS

ORDER NO.	Diameter of Shanlt	Material Diameter (mm)	Collet Travel Distance (mm)	Weight (kgs)	Maximum Bearing KN (kgf)	Maximum Holding Power KN (kgf)	Maximum Speed (r.p.m.)	CODE NO.
CR42A5	A2-5	42	7	6.2	25(2549)	55(5608)	6,000	5003-040
CR42A6	A2-6	42	7	8.2	25(2549)	55(5608)	6,000	5003-041
CR60A6	A2-6	60	7	13	33(3365)	59(6016)	5,000	5003-042

4-Jaw Wedge Type Trough Hole Power Chuck (Without Adaptor)





DIMENSIONS

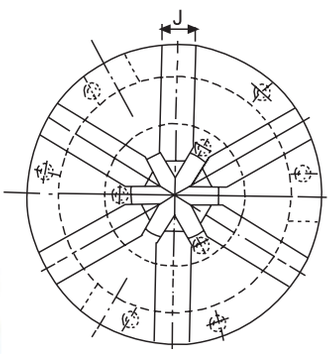
ORDER NO.	A	B	C (H6)	D	E	M	G	H	J	K	L	F	N Max.	N Min.	O Max.	O Min.	P Max.	P Min.	S	T	U	W
VNIT-208	210	91	170	20.5	133.35	5	37	14	52	4-M12	2	66	38.7	35	29.75	14.75	14.5	1.5	30	20	M60x2	25
VNIT-210	254	100	220	25	171.45	5	42	16	75	4-M16	2	94	51	46.6	33.75	14.75	8.5	-10.5	45	22	M85x2	30
VNIT-212	304	110	220	28	171.45	6	52	21	91	4-M16	2	108	61.3	56	45.75	15.75	8	-15	50	23	M100x2	30
VNIT-215	381	133	300	43	235	6	62	24	117.5	4-M20	5	139	82	76.7	46.75	13.75	7	-16	60	30	M130x2	43

SPECIFICATIONS

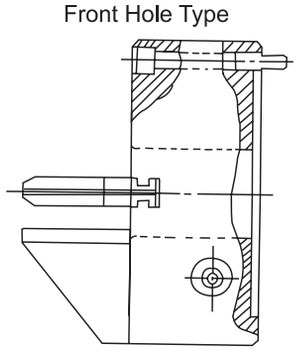
ORDER NO.	Through-Hole (mm)	Plunger Stroke (mm)	Jaw Stroke (mm)	Max. Draw Bar Pull Force (kgf)	Max. Gripping Force (kgf)	Max. Speed (r.p.m.)	Weight (kgs)	Matching Cylinder	Max. Operating Pressure (kgf/cm²)	CODE NO.
VNIT-208	Ø52	16	7.4	2294	5716	4900	24	M1552	17.3	5003-050
VNIT-210	Ø75	19	8.8	2906	7546	4200	36	M1875	18.4	5003-051
VNIT-212	Ø91	23	10.6	3739	9789	3300	58.5	M2091	18.4	5003-052
VNIT-215	Ø117.5	23	10.6	6828	12236	2500	114	M2511	15.3	5003-053

6-Jaw Awl Type Chucks

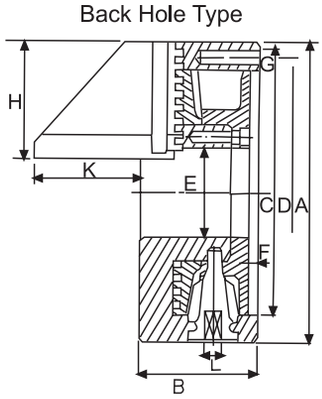
Scroll Chucks Series



Front Hole Type



Back Hole Type



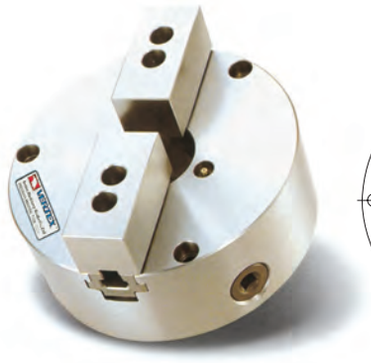
SPECIFICATIONS

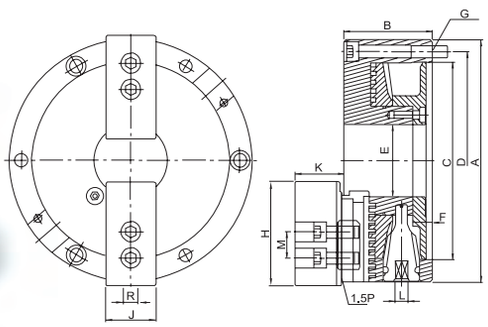
Unit:mm

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	Gross Weight (kgs)	Max. Speed (r.p.m.)	Max. Gripping Diameter O.D. Clamping	CODE NO.
VAS-4	112	58	80	95	32	4.5	3-M8	45	14	46	8	4.2	1200	Ø2-32	5005-011
VAS-6	167	65	130	147	60	5	3-M10	66	19	43	10	9.2	1200	Ø3-60	5005-012

2-Jaw Steel Body Chucks

Steel Body Chucks Series





Steel Body Chucks:

- Hard jaws and soft jaws can be adjusted just like on a Hydraulic power Chuck to increase the gripping range.
- Hard jaws as well as Soft jaws are interchangeable with those of CNC Lathes.
- Can be used as a “Forming plate” for machining soft Jaws.
- The Chuck Handle can be operated easily and smoothly.
- Chuck Body is made by steel to enhance safety operations for high speed machining.

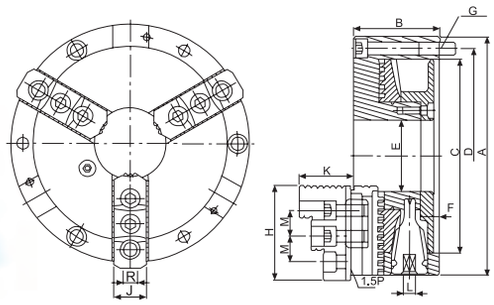
SPECIFICATIONS

Unit:mm

ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	R	Gross Weight (kgs)	Max. Speed (r.p.m.)	Max. Gripping Diameter		CODE NO.
																O.D. Clamping	I.D. Clamping	
VTNT-07	193	78	155	172	58	5	3-M10	90	42	44	11	20	12	15.8	3200	Ø8~Ø235	Ø66~Ø235	5005-031
VTNT-09	233	85	190	210	70	6	3-M12	100	48	47	12	25	14	24.5	2800	Ø11~Ø280	Ø85~Ø280	5005-032

3-Jaw Steel Body Chucks

Steel Body Chucks Series



Steel Body Chucks:

- Chuck Body is made by steel to enhance safety operations for high speed machining.
- Hard jaws as well as Soft jaws are interchangeable with those of CNC Lathes.
- The Chuck Handle can be operated easily and smoothly.
- Can be used as a “Forming plate” for machining soft jaws.
- Hard jaws and soft jaws can be adjusted just like on a Hydraulic power Chuck to increase the gripping range.

SPECIFICATIONS

Unit:mm

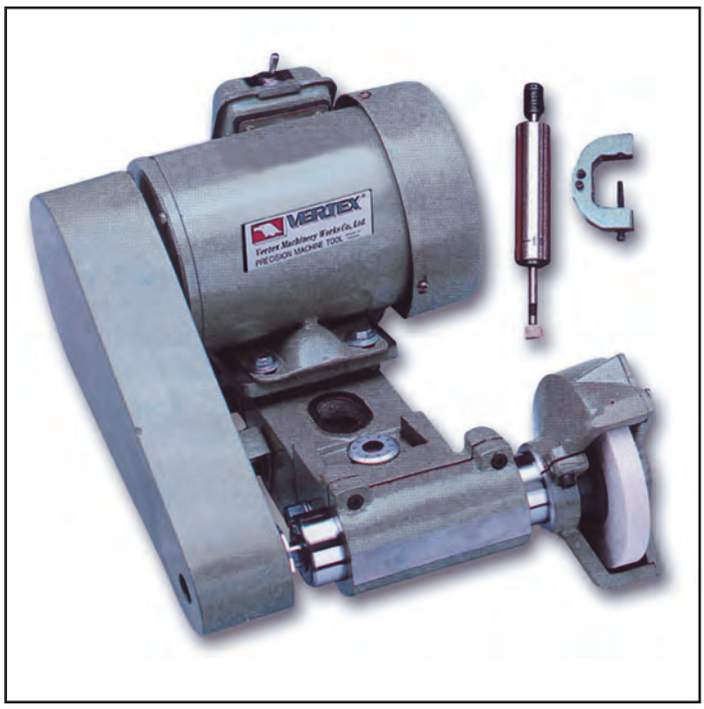
ORDER NO.	A	B	C	D	E	F	G	H	J	K	L	M	R	Gross Weight (kgs)	Max. Speed (r.p.m.)	Max. Gripping Diameter		CODE NO.
																O.D. Clamping	I.D. Clamping	
VNT-07	193	78	155	172	58	5	3-M10	78	28	46	11	20	12	14.8	3200	Ø8~Ø235	Ø66~Ø235	5005-040
VNT-09	233	85	190	210	70	6	3-M12	92	32	53	12	25	14	23.4	2800	Ø11~Ø280	Ø85~Ø280	5005-041
VNT-10	273	91	230	250	89	6	3-M12	104	37	56	12	30	16	32	2400	Ø12~Ø330	Ø92~Ø330	5005-042
VNT-12	310	104	260	285	105	7	3-M12	118	47	67	14	30	21	46	2100	Ø15~Ø370	Ø104~Ø370	5005-043

ILLUSTRATE:

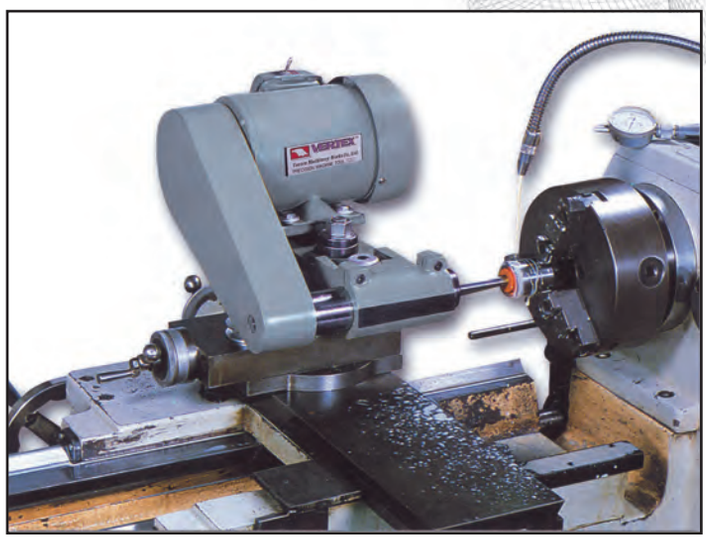
Can for more large capacity.

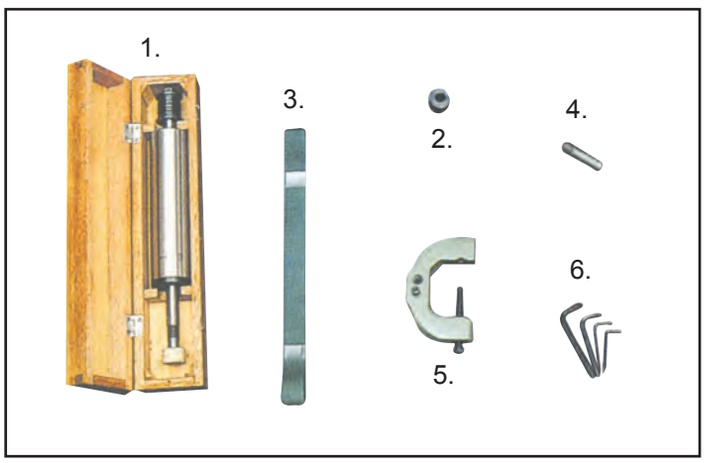
The hard jaw & soft jaw is same as hydraulic power chuck

Tool Post Grinder ON Lathe



For Internal Grinding





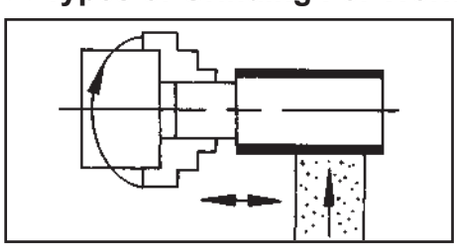
Standard Accessories

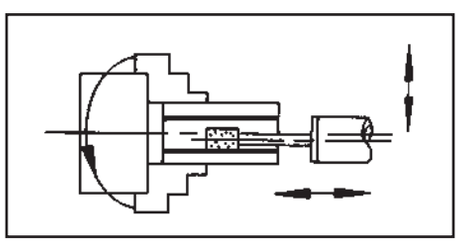
1.Internal Spindle 1
2.Pulley for Internal Grinding 2
3.Flat Belt 1
4.Diamond tool 1
5.Holder for Diamond Tool 1
6.key Folds (8, 5, 3, 2mm) 4

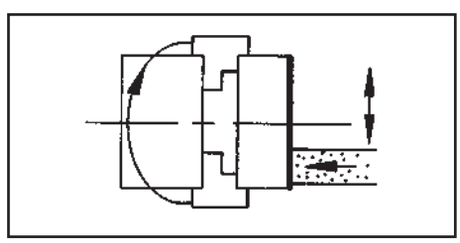
Characteristic Features

- Both the main shafts have been specially designed, and the world-wide precision bearing is used to fit the main shafts which are made of alloy steel heat-treated for high wear resistance, precision, as well as maintaining to the lowest temperature for durability and stability.
- The motor base and the spindle bushing are adjustable.
- The motor is well designed with a special and nice appearance, The R.P.M. of this motor varied depending on the size of the workpiece.
- This grinder is capable of grinding the work piece to a minimum of 3 mm in outer diameter and from 2mm up in inner diameter (bore) with the accuracy within 0.003mm and a well finished surface. (supplied with special attachments).
- The spindle bushing is made of cast iron, and supported by three surfaces. Therefore, it is durable and elastic.
- Materials such as steel, iron, copper (brass), aluminum, cast iron, plastics, procelain, marble, regardless of being heat treated or not, can be ground on this machine which functions lie a cylindrical grinder. So it may lower the cost of the production.
  We assure you of high quality products.

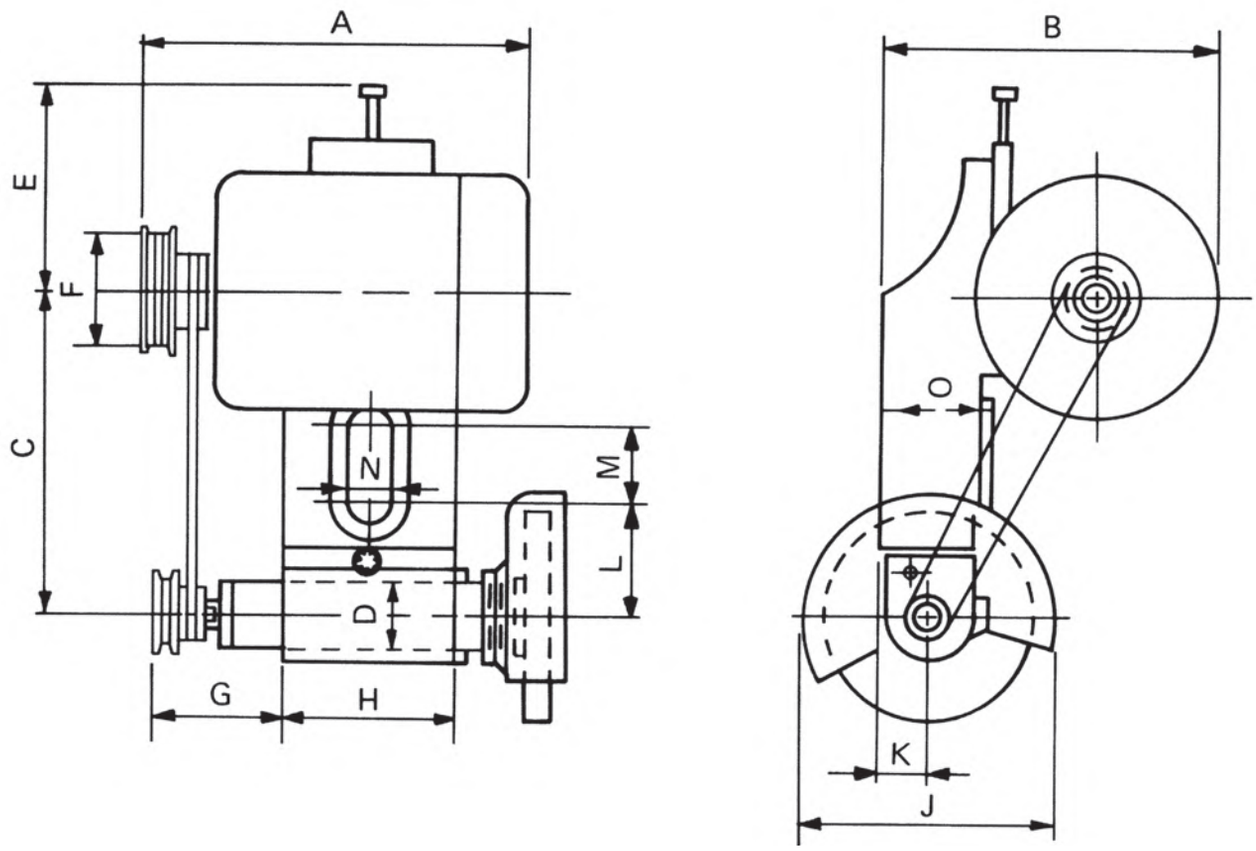
※ Types of Grinding For Work Pieces







Tool Post Grinder ON Lathe



ORDER NO.	Main Dimension. (mm)														Net Weight (kgs)	Packing Size (mm)
	A	B	C	D	E	F	G	H	J	K	L	M	N	O		
VGR-185	352	350	300-340	80	180	138	85	190	330	45-70	140	40	32	120	80	700x500x520
VGR-175	315	300	260-320	60	170	138	120	104	280	45-70	135	40	30	92	75	650x460x460
VGR-165	280	275	260-310	50	160	110	65	102	230	40-65	105	40	30	85	48	520x430x350
VGR-150	280	275	250-300	48	160	110	65	102	150	40-65	105	40	30	85	38	520x430x350
VGR-125	270	230	230-280	48	-	110	65	92	150	34-58	90	15	25	75	35	520x430x350
VGR-100	235	200	170	40	-	110	50	80	150	28	45	10	25	64	24	450x320x340

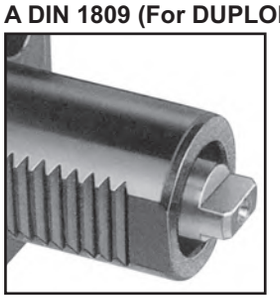
ORDER NO.	HP	External Spindle			Internal Spindle					Grinder on Lather (Length of Bed of Lather) Ft.	Swing m/m	CODE NO.
		Size of Wheel dia x width-hole	(R.P.M.) Non-load Speed		Diameter to be ground	Size of Wheel dia x width x hole	(R.P.M.) Non-load Speed		Grinding Depth (mm)			
			60 cycle	50 cycle								
VGR-185	3	12″x1″x1″	1930	1600	-	-	-	-	-	over 12	800-1800	5004-001
VGR-175	2	10″x1″x1″	2300	1930	-	-	-	-	-	10-12	700-1700	5004-002
VGR-165	1	8″x3/4″x3/4″	3000 3700	2490 3070	25-50	1″x3/8″x1/4″	20000 13500	16800 11500	70	8-10	650-1600	5004-003
VGR-150	1	5″x5/8″x5/8″	4500 6000	3750 5000	19-40	1″x3/8″x1/4″	20000 13500	16800 11500	70	6-8	550-900	5004-004
VGR-125	1/2	5″x5/8″x5/8″	4500 6000	3750 5000	19-40	1″x3/8″x1/4″	20000 13500	16800 11500	70	4-6	430-850	5004-005
VGR-100	1/4	5″x5/8″x5/8″	4500 6000	3750 5000	19-40	1″x3/8″x1/4″	20000 13500	16800 11500	50	under 4	320-400	5004-006

VDI Tool Holders

Coupling Type System

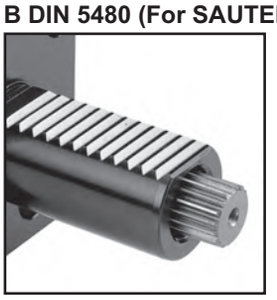
DIN69880

A DIN 1809 (For DUPLOMATIC)



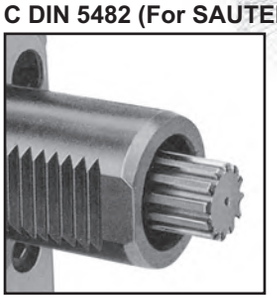
Coupling to DIN 1809

B DIN 5480 (For SAUTER/DUPLOMATIC)



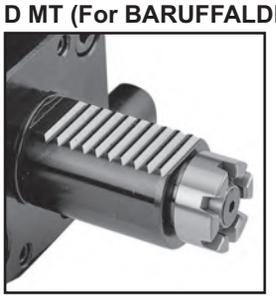
Coupling to DIN 5480

C DIN 5482 (For SAUTER/DUPLOMATIC)



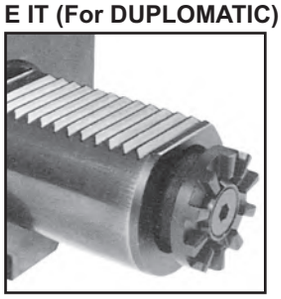
Coupling to DIN 5482

D MT (For BARUFFALDI)



Spur Coupling

E IT (For DUPLOMATIC)



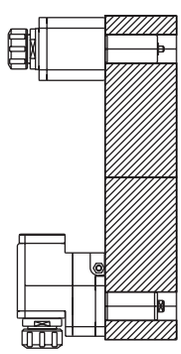
Spur Coupling

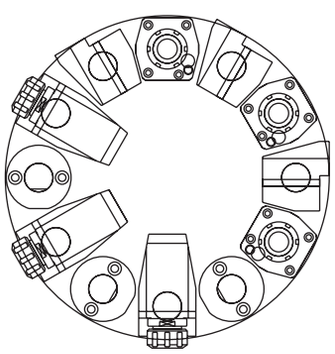
VDI Tool Holders

Tool Holders Direction System

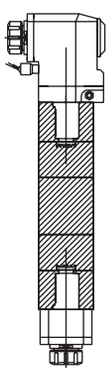
DIN69880

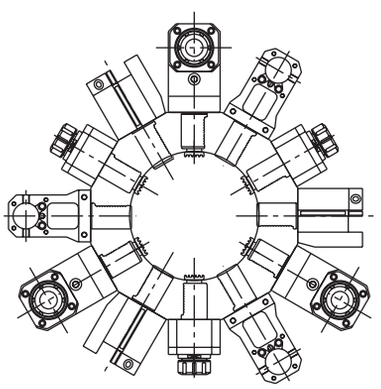
A: Axial Direction



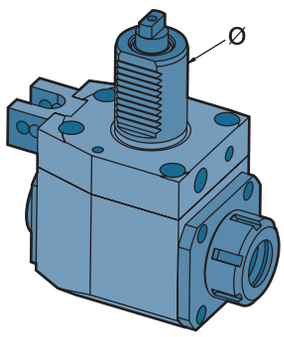


B: Radial Direction (Star Turret)



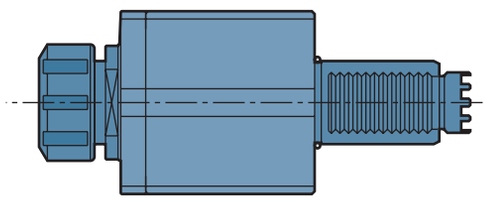


Model



DA

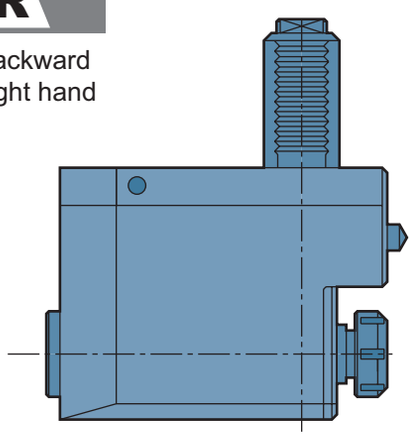
Stright Direct Drive



	VDI 20	VDI 30	VDI 40	VDI 50
SHAFT DIA.	20	30	40	50

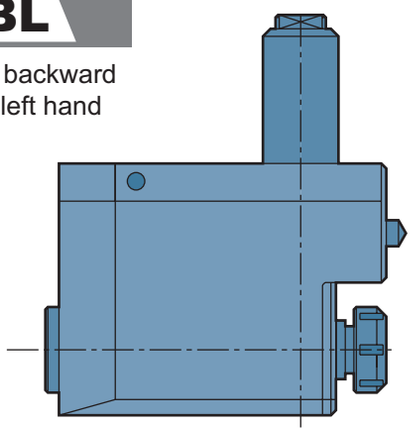
BR

B: backward
R: right hand



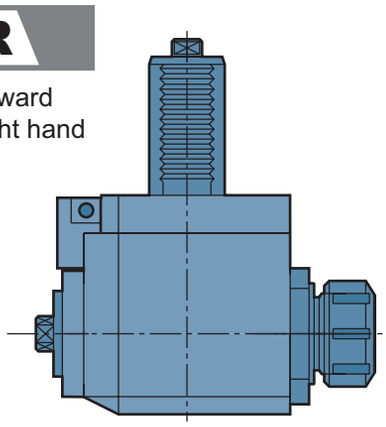
BL

B: backward
L: left hand



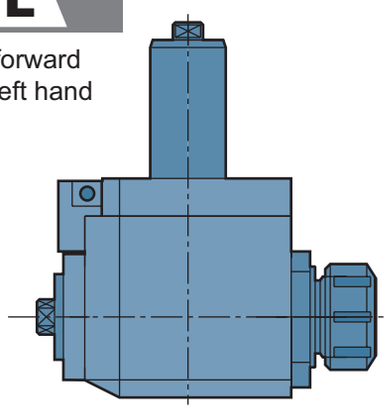
FR

F: forward
R: right hand



FL

F: forward
L: left hand



TXX

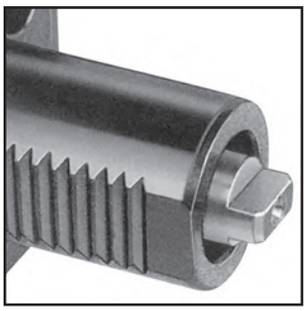
T: Tapping

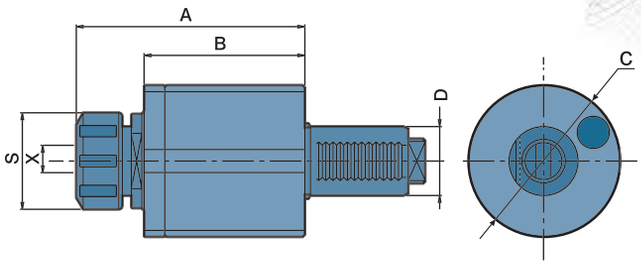
EX:

- BR4018093290 it's VDI 40, right hand, coupling type 1809, backward come with ER 32 nut. P.C.D. is 90mm
- FL3054822555 it's VDI 30 left hand coupling type 5482 (B15x12) forward, come with ER 25 nut. P.C.D. is 55mm

Axial Drilling And Milling Heads

DIN 1809





Power Transmission According To DIN 1809

- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
DA20180916	20	1-10 ER16	32	6000	1 : 1	77	49	58	5006-001
DA30180925	30	1-16 ER25	42	6000	1 : 1	101	70	68	5006-002
DA40180932	40	2-20 ER32	50	6000	1 : 1	89	55	86	5006-003
DA50180940	50	3-26 ER40	63	6000	1 : 1	120	81.5	96	5006-004
DA60180950	60	10-34 ER50	78	6000	1 : 1	140	88.5	116	5006-005

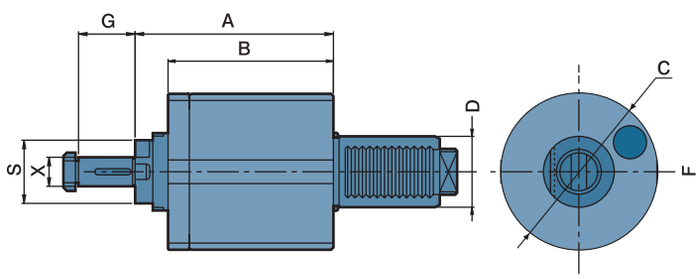
Axial Tapping Heads

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
TDA30180916	30	1-10 ER16	32	3000	1 : 1	103	70	68	5006-006
TDA40180920	40	1-13 ER20	35	3000	1 : 1	112	74	86	5006-007
TDA50180925	50	1-16 ER25	42	3000	1 : 1	121	81.5	96	5006-008
TDA60180932	60	2-20 ER32	50	3000	1 : 1	147	88.5	116	5006-009

Axial Milling Heads

DIN 1809



- External coolant and intermediate rings supply
- To be used for cutter arbor according to DIN 6358

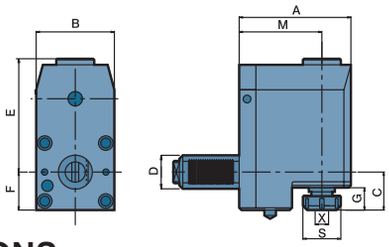
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	CODE NO.
DA30180916C	30	16	32	3000	1 : 1	91.5	70	68	27	5006-010
DA40180922C	40	22	32	3000	1 : 1	68.5	55	86	31	5006-012
DA50180922C	50	22	40	3000	1 : 1	117	81.5	96	31	5006-013
DA50180927C	50	27	40	3000	1 : 1	117	81.5	96	33	5006-014

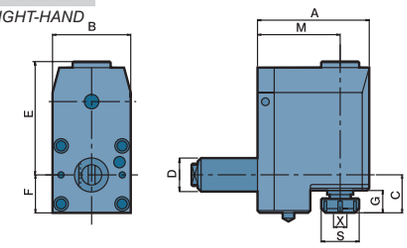
Radial Drilling And Milling Heads-Back Ward Type

DIN 1809

MODE: BL
LEFT-HAND



MODE: BR
RIGHT-HAND



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
BR2018091657 BL2018091657	20	1-10 ER16	30	5000	1 : 1	83	50	43	70	27	27	60	5006-015
BR3018092569 BL3018092569	30	1-16 ER25	42	5000	1 : 1	95	60	41.5	75.5	31.5	29	69	5006-016
BR4018093290 BL4018093290	40	2-20 ER32	50	5000	1 : 1	124	80	44	110	42	34	90	5006-017
BR5018094090 BL5018094090	50	3-26 ER40	63	5000	1 : 1	129	86	49	112	45	39	90	5006-018
BR60180950102 BL60180950102	60	10-34 ER50	78	5000	1 : 1	147	104	83	118	54	42	106	5006-019

Radial Tapping Heads-Back Ward Type

DIN 1809

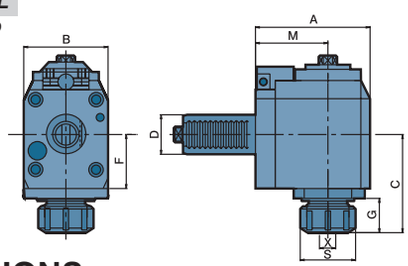
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
TBR3018091669 TBL3018091669	30	1-10 ER16	32	3000	1 : 1	95	60	44	75.5	31.5	32	69	5006-020
TBR4018092090 TBL4018092090	40	1-13 ER20	35	3000	1 : 1	124	80	50	110	42	34	90	5006-021
TBR5018092590 TBL5018092590	50	1-16 ER25	42	3000	1 : 1	129	86	54	112	45	36	90	5006-022
TBR60180932102 TBL60180932102	60	2-20 ER32	50	3000	1 : 1	147	104	87	118	54	40	106	5006-023

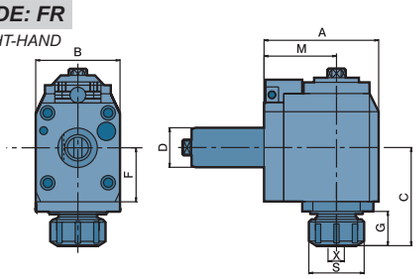
Radial Drilling And Milling Heads

DIN 1809

MODE: FL
LEFT-HAND



MODE: FR
RIGHT-HAND



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
FR3018092555 FL3018092555	30	1-16 ER25	42	5000	1 : 1	87	64	74.5	41	26	55	5006-024
FR4018093265 FL4018093265	40	2-20 ER32	50	5000	1 : 1	99	80	71	40	23	65	5006-025
FR5018094075 FL5018094075	50	3-26 ER40	63	5000	1 : 1	115	88	103	56	40	75	5006-026

Radial Tapping Heads

DIN 1809

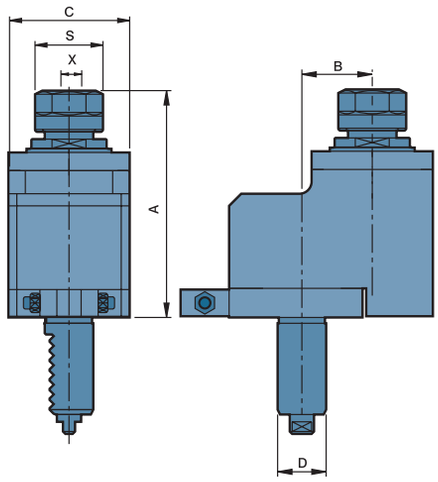
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
TFR3018091655 TFL3018091655	30	1-10 ER16	30	3000	1 : 1	87	64	75	41	30	55	5006-027
TFR4018092065 TFL4018092065	40	1-13 ER20	35	3000	1 : 1	99	80	70	40	25	65	5006-028
TFR5018092575 TFL5018092575	50	1-16 ER25	42	3000	1 : 1	115	88	103	56	42	75	5006-029

Axial Drilling And Milling Heads

OFFSET

DIN 1809



- Collet is not included
- To be used for collet DIN 6499
- External coolant supply

DIMENSIONS

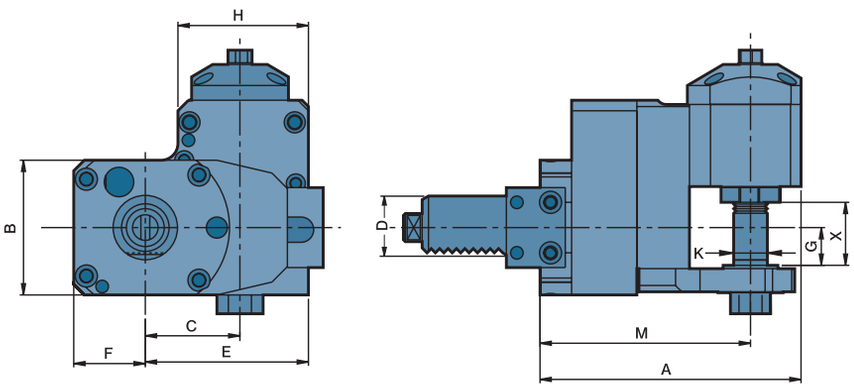
i is speed ratio example:1:2. It's 2 times of speed

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
DA2018091629	20	1-10 ER16	30	4000	1 : 1	93.5	29	50	5006-030
DA3018092529	30	1-16 ER25	42	4000	1 : 1	100	29	60	5006-031
DA3018092529/1	※30	1-16 ER25	42	8000	1 : 2	100	29	60	5006-032
DA4018093250	40	2-20 ER32	50	4000	1 : 1	113	50	80	5006-033
DA5018094065	50	3-26 ER40	63	3000	1 : 1	124	65	86	5006-034

Radial Milling Heads

DISK CUTTER UNITS

DIN 1809



- External coolant supply

DIMENSIONS

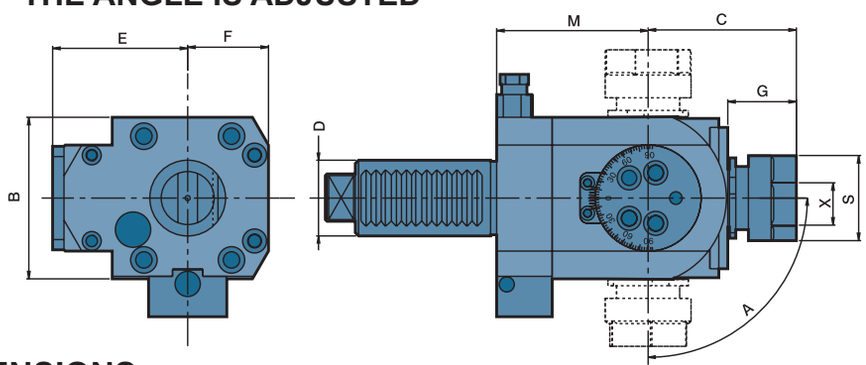
i;(3:1),It's 3 times of speed decrease

ORDER NO.	D DIN 69880	X Capacity	Maximum R.P.M.	i	A	B	C	E	F	G	H	K	M	CODE NO.
BR30180916C/3 BL30180916C/3	30	29	3000	3 : 1	124	64	45	77.5	34	18	62	16	100	5006-035

Angular Heads

THE ANGLE IS ADJUSTED

DIN 1809



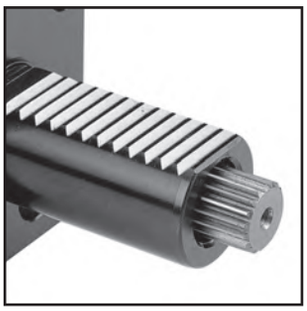
- To be used for collet DIN 6499
- External coolant supply
- Collet is not included

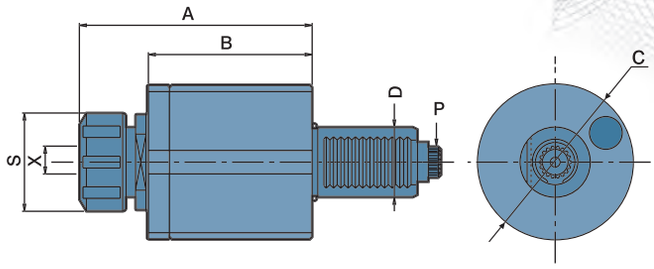
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
DA30180920B	30	1-13 ER20	35	4000	1 : 1	±90°	64	58.5	53.5	32	27	60	5006-036A

Axial Drilling And Milling Heads

DIN 5480





Power Transmission According To DIN 5480

- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5480	CODE NO.
DA30548025	30	1-16 ER25	42	6000	1 : 1	101	70	68	W16X0.8	5006-037
DA40548032	40	2-20 ER32	50	6000	1 : 1	90	55	86	W20X0.8	5006-038

Axial Tapping Heads

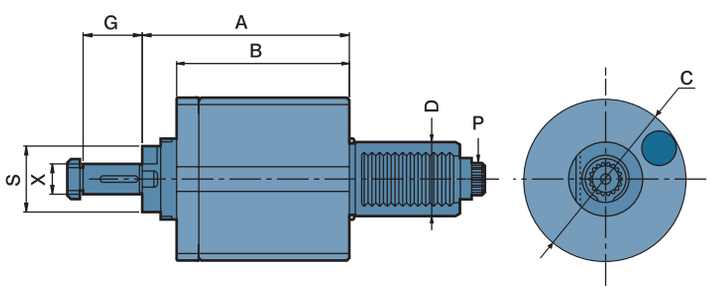
DIN 5480

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5480	CODE NO.
TDA30548016	30	1-10 ER16	30	3000	1 : 1	105	70	68	W16X0.8	5006-039A
TDA40548020	40	1-13 ER20	35	3000	1 : 1	93	55	86	W20X0.8	5006-040A

Axial Milling Heads

DIN 5480



- To be used for cutter arbor according to DIN 6358
- External coolant and intermediate rings supply

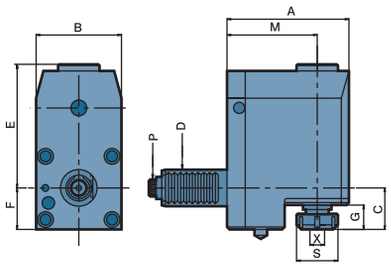
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	P DIN 5480	CODE NO.
DA30548016C	30	16	32	3000	1 : 1	91.5	70	68	27	W16X0.8	5006-041
DA40548016C	40	16	32	3000	1 : 1	68.5	55	86	27	W20X0.8	5006-042
DA40548022C	40	22	32	3000	1 : 1	68.5	55	86	31	W20X0.8	5006-043

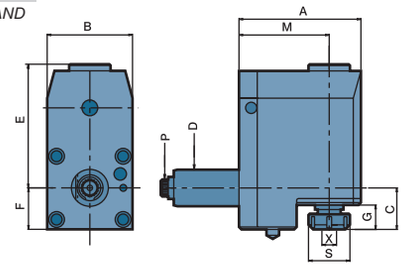
Radial Drilling And Milling Heads-Backward Type

SET BACK **DIN 5480**

MODE: BL
LEFT-HAND



MODE: BR
RIGHT-HAND



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5480	CODE NO.
BR3054802569 BL3054802569	30	1-16 ER25	42	5000	1 : 1	95	60	42	75.5	31.5	28.5	69	W16X0.8	5006-044
BR4054803290 BL4054803290	40	2-20 ER32	50	5000	1 : 1	124	80	44	110	42	34	90	W20X0.8	5006-045

Radial Tapping Heads-Set Back

DIN 5480

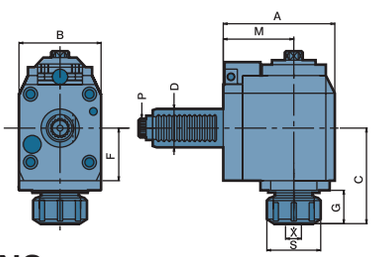
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5480	CODE NO.
TBR3054801669 TBL3054801669	30	1-10 ER16	30	3000	1 : 1	95	60	44	75.5	31.5	32	69	W16X0.8	5006-046
TBR4054802090 TBL4054802090	40	1-13 ER20	35	3000	1 : 1	124	80	50	110	42	34	90	W20X0.8	5006-047

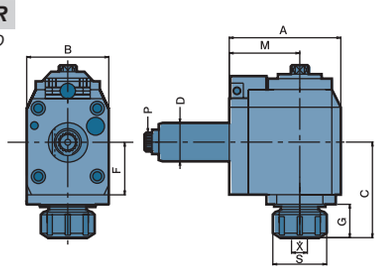
Radial Drilling And Milling Heads

DIN 5480

MODE: FL
LEFT-HAND



MODE: FR
RIGHT-HAND



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	P DIN 5480	CODE NO.
FR3054802555 FL3054802555	30	1-16 ER25	42	5000	1 : 1	97	64	74.5	41	26	55	W16X0.8	5006-048
FR3054802585 FL3054802585	30	1-16 ER25	42	5000	1 : 1	117	64	74.5	41	26	85	W16X0.8	5006-049
FR4054803265 FL4054803265	40	2-20 ER32	50	5000	1 : 1	99	80	71	40	23	65	W20X0.8	5006-050
FR4054803285 FL4054803285	40	2-20 ER32	50	5000	1 : 1	119	80	71	40	23	85	W20X0.8	5006-051
FR40548032100 FL40548032100	40	2-20 ER32	50	5000	1 : 1	134	80	71	40	23	100	W20X0.8	5006-052

Radial Tapping Heads

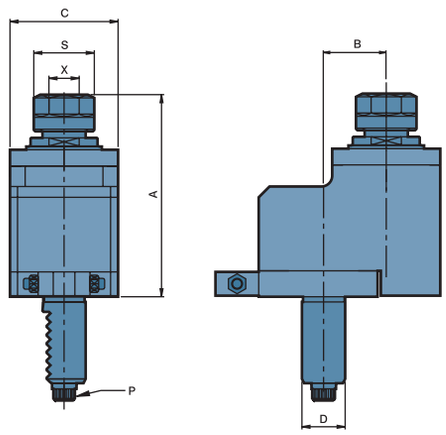
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	P DIN 5480	CODE NO.
TFR3054801665 TFL3054801665	30	1-10 ER16	30	3000	1 : 1	97	64	75	41	30	55	W16X0.8	5006-053
TFR3054801685 TFL3054801685	30	1-10 ER16	30	3000	1 : 1	117	64	75	41	30	85	W16X0.8	5006-054
TFR4054802065 TFL4054802065	40	1-13 ER20	35	3000	1 : 1	99	80	70	40	25	65	W20X0.8	5006-055
TFR4054802085 TFL4054802085	40	1-13 ER20	35	3000	1 : 1	119	80	70	40	25	85	W20X0.8	5006-056

Axial Drilling And Milling Heads-Offset

OFFSET

DIN 5480



- Collet is not included
- To be used for collet DIN 6499
- External coolant supply

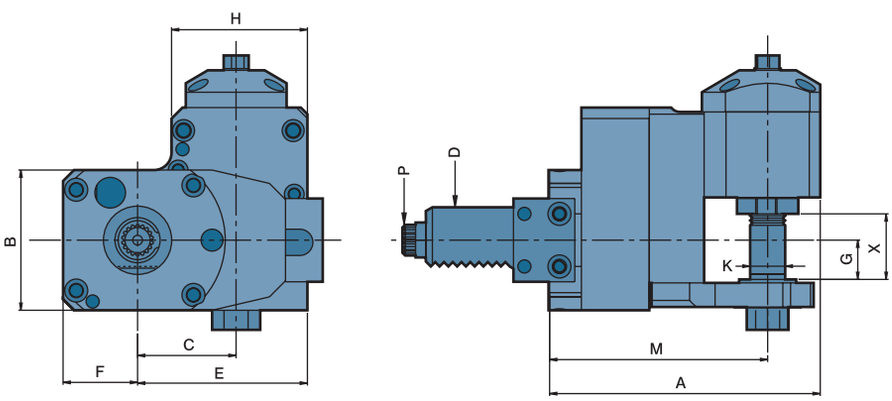
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5480	CODE NO.
DA3054802529	30	1-16 ER25	42	4000	1 : 1	100	29	60	W16X0.8	5006-057
DA3054802529/1	※ 30	1-16 ER25	42	8000	1 : 2	100	29	60	W16X0.8	5006-058
DA4054803250	40	2-20 ER32	50	4000	1 : 1	113	50	80	W20X0.8	5006-059

Radial Drilling And Milling Heads

DISK CUTTER UNITS

DIN 5480



- External coolant supply

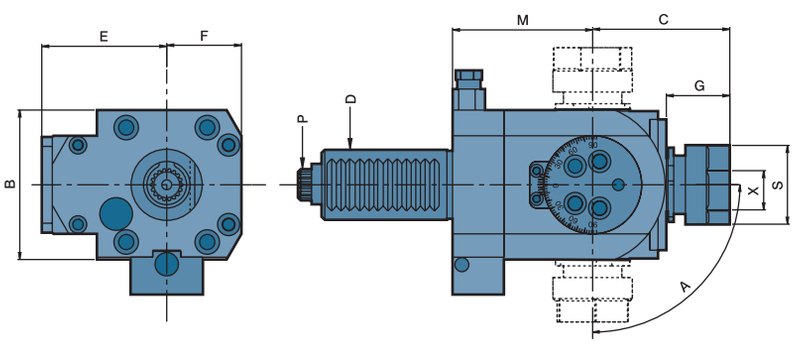
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	Maximum R.P.M.	i	A	B	C	E	F	G	H	K	M	P DIN 5480	CODE NO.
BR30548016C/3 BL30548016C/3	30	29	3000	3 : 1	124	64	45	77.5	34	18	62	16	100	W16X0.8	5006-060

Angular Heads

ANGLE IS ADJUSTED

DIN 5480



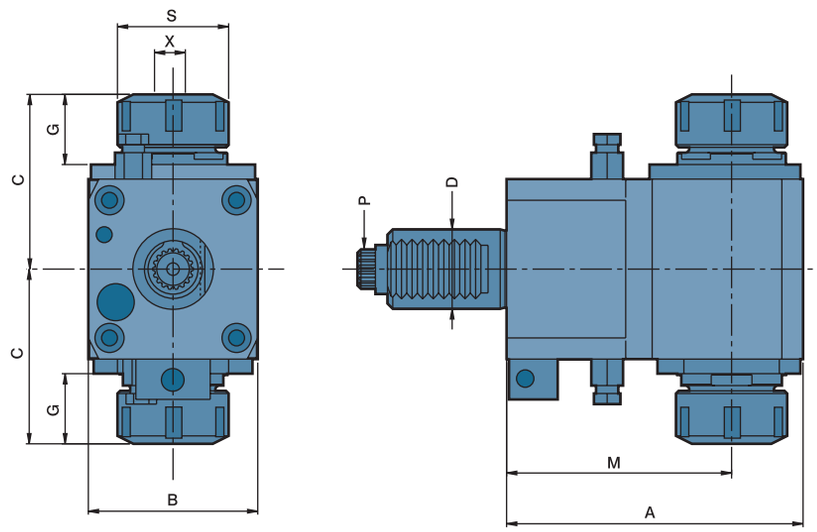
- Collet is not included
- To be used for collet DIN 6499
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5480	CODE NO.
DA30548020B	30	1-13 ER20	35	4000	1 : 1	±90°	64	59	54	32	27	67	W16X0.8	5006-061A

Radial Double Drilling And Milling Heads

DIN 5480



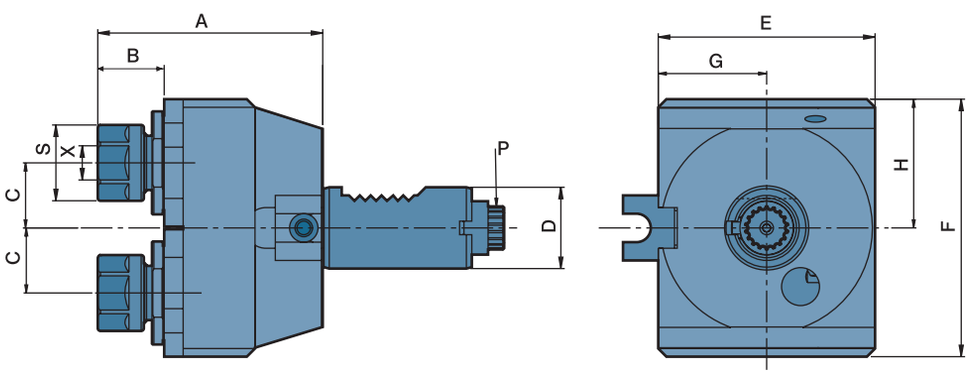
- Collet is not included
- External coolant supply
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	M	P DIN 5480	CODE NO.
DF3054802585D	30	1-16 ER25	42	4000	1 : 1	112	64	66	26.5	85	W16X0.8	5006-062
DF4054803285D	40	2-20 ER32	50	4000	1 : 1	119	80	82	28	85	W20X0.8	5006-063
DF40548032100D	40	2-20 ER32	50	4000	1 : 1	134	80	82	28	100	W20X0.8	5006-064

Axial Double Drilling And Milling Heads

DOUBLE COLLETS, Y OFFSET **DIN 5480**



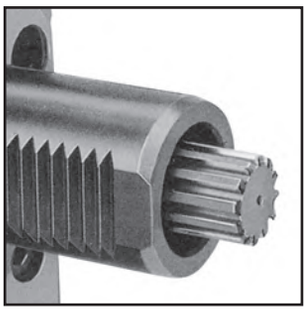
- Collet is not included
- External coolant supply
- To be used for collet DIN 6499

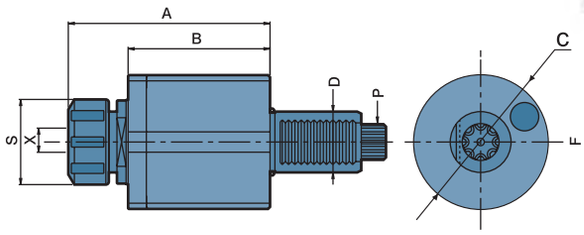
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	H	P DIN 5480	CODE NO.
DA30548016DY	30	1-10 ER16	30	4000	1 : 1	83	24.5	24	80	95	40	47.5	W16X0.8	5006-065

Axial Drilling And Milling Heads

FOR DIN 5482 MACHINE USING **DIN 5482**





Power Transmission According To DIN 5482

- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5482	CODE NO.
DA30548225	30	1-16 ER25	42	6000	1 : 1	101	70	68	B15X12	5006-066
DA40548232	40	2-20 ER32	50	6000	1 : 1	110	73.5	86	B17X14	5006-067
DA50548240	50	3-26 ER40	63	6000	1 : 1	121	81.5	96	B20X17	5006-068
DA60548250	60	10-34 ER50	78	6000	1 : 1	140	88.5	116	B25X22	5006-069

Axial Tapping Heads

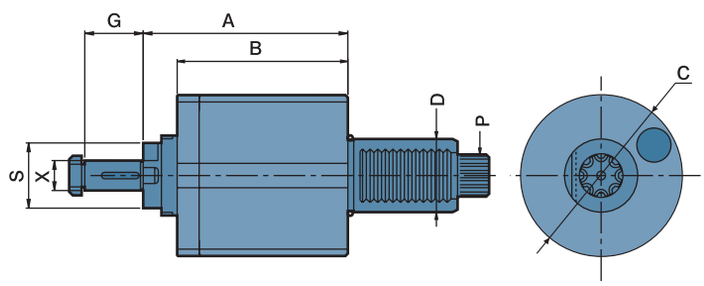
DIN 5482

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5482	CODE NO.
TDA30548216	30	1-10 ER16	30	3000	1 : 1	103	70	68	B15X12	5006-070
TDA40548220	40	1-13 ER20	35	3000	1 : 1	104	73.5	86	B17X14	5006-071
TDA50548225	50	1-16 ER25	42	3000	1 : 1	121	81.5	96	B20X17	5006-072
TDA60548232	60	2-20 ER32	50	3000	1 : 1	147	88.5	116	B25X22	5006-073

Axial Milling Heads

DIN 5480



- External coolant and intermediate rings supply
- To be used for cutter arbor according to DIN 6358

DIMENSIONS

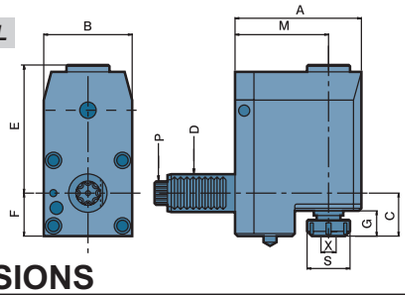
ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	P DIN 5482	CODE NO.
DA30548216C	30	16	32	3000	1 : 1	91.5	70	68	27	B15X12	5006-074
DA40548216C	40	16	32	3000	1 : 1	68.5	55	86	27	B17X14	5006-075
DA40548222C	40	22	32	3000	1 : 1	68.5	55	86	31	B17X14	5006-076
DA50548222C	50	22	40	3000	1 : 1	117	81.5	96	31	B20X17	5006-077
DA50548227C	50	27	40	3000	1 : 1	117	88.5	96	33	B20X17	5006-078

Radial Drilling And Milling Heads

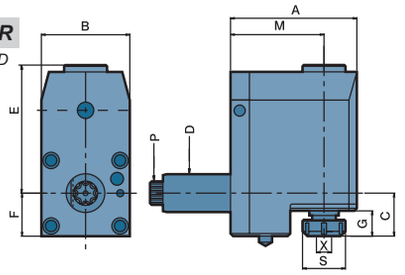
BACKWARDS

DIN 5482

MODE: BL
LEFT-HAND



MODE: BR
RIGHT-HAND



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5482	CODE NO.
BR3054822569 BL3054822569	30	1-16 ER25	42	5000	1 : 1	95	60	42	75.5	31.5	28.5	69	B15X12	5006-079
BR4054823290 BL4054823290	40	2-20 ER32	50	5000	1 : 1	124	80	44	110	42	34	90	B17X14	5006-080
BR5054824090 BL5054824090	50	3-26 ER40	63	5000	1 : 1	129	86	49	112	45	39	90	B20X17	5006-081
BR60548250102 BL60548250102	60	10-34 ER50	78	5000	1 : 1	147	104	83	118	54	42	106	B25X22	5006-082

Radial Tapping Heads-Backwards

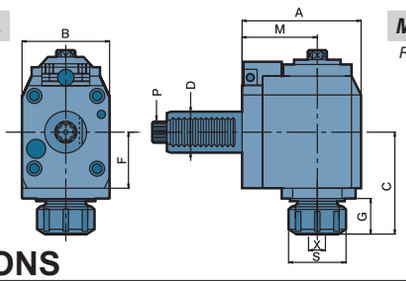
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5482	CODE NO.
TBR3054821669 TBL3054821669	30	1-10 ER16	30	3000	1 : 1	95	60	44	75.5	31.5	32	69	B15X12	5006-083
TBR4054822090 TBL4054822090	40	1-13 ER20	35	3000	1 : 1	24	80	50	110	42	34	90	B17X14	5006-084
TBR5054822590 TBL5054822590	50	2-16 ER25	42	3000	1 : 1	129	86	54	112	45	36	90	B20X17	5006-085
TBR60548232102 TBL60548232102	60	2-20 ER32	50	3000	1 : 1	147	104	87	118	54	40	106	B25X22	5006-086

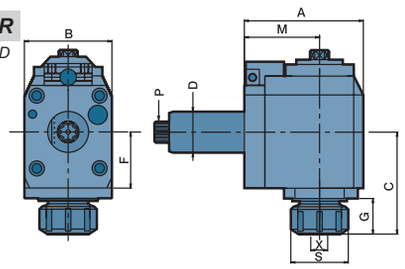
Radial Drilling And Milling Heads

DIN 5482

MODE: FL
LEFT-HAND



MODE: FR
RIGHT-HAND



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	P DIN 5482	CODE NO.
FR3054822565 FL3054822565	30	1-16 ER25	42	5000	1 : 1	97	64	74.5	41	26	65	B15X12	5006-087
FR3054822585 FL3054822585	30	1-16 ER25	42	5000	1 : 1	117	64	74.5	41	26	85	B15X12	5006-088
FR4054823265 FL4054823265	40	2-20 ER32	50	5000	1 : 1	99	80	71	40	23	65	B17X14	5006-089
FR4054823285 FL4054823285	40	2-20 ER32	50	5000	1 : 1	119	80	71	40	23	85	B17X14	5006-090
FR5054824075 FL5054824075	50	3-26 ER40	63	5000	1 : 1	115	88	103	56	40	75	B20X17	5006-091

Radial Tapping Heads

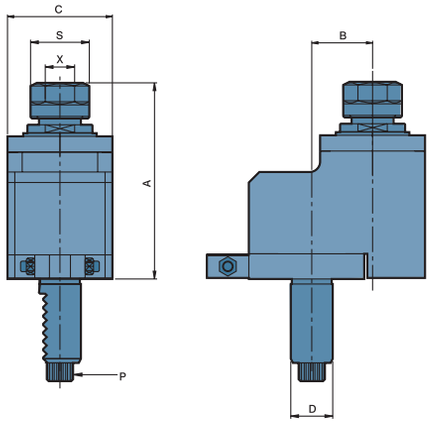
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	P DIN 5482	CODE NO.
TFR3054821665 TFL3054821665	30	1-10 ER16	30	3000	1 : 1	97	64	75	41	30	65	B15X12	5006-092
TFR3054821685 TFL3054821685	30	1-10 ER16	30	3000	1 : 1	117	64	75	41	30	85	B15X12	5006-093
TFR4054822065 TFL4054822065	40	1-13 ER20	35	3000	1 : 1	99	80	70	40	25	65	B17X14	5006-094
TFR4054822085 TFL4054822085	40	1-13 ER20	35	3000	1 : 1	119	80	70	40	25	85	B17X14	5006-095
TFR5054822575 TFL5054822575	50	1-16 ER25	42	3000	1 : 1	115	88	103	56	42	75	B20X17	5006-096

Axial Drilling And Milling Heads

OFFSET TYPE

DIN 5482



- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

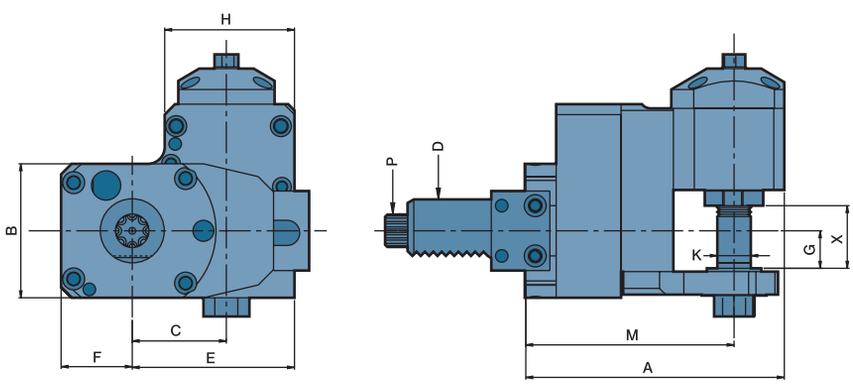
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	P DIN 5482	CODE NO.
DA3054822529	30	1-16 ER25	42	4000	1 : 1	100	29	60	B15X12	5006-097
DA3054822529/1	※ 30	1-16 ER25	42	8000	1 : 2	100	29	60	B15X12	5006-098
DA4054823250	40	2-20 ER32	50	4000	1 : 1	113	50	80	B17X14	5006-099
DA5054824065	50	3-26 ER40	63	3000	1 : 1	124	65	86	B20X17	5006-100

Radial Milling Heads

DISK CUTTER UNITS

DIN 5482



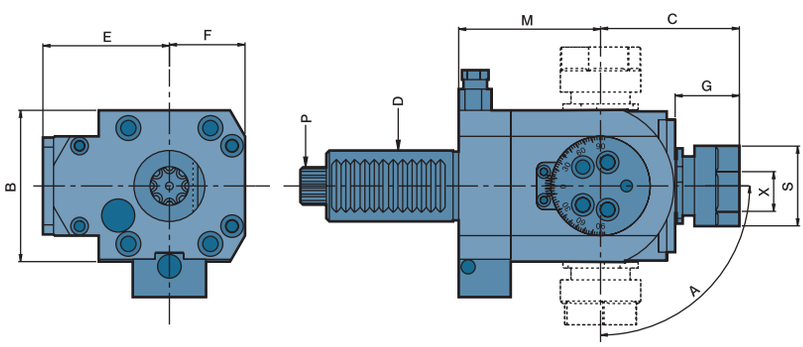
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	Maximum R.P.M.	i	A	B	C	E	F	G	H	K	M	P DIN 5480	CODE NO.
BR30548216C/3 BL30548216C/3	30	29	3000	3 : 1	124	64	45	77.5	34	18	62	16	100	B15X12	5006-101

Angular Heads

DIN 5482



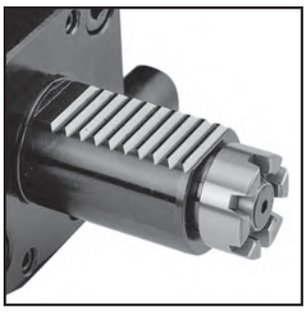
- To be used for collet DIN 6499
- Collet is not included
- External coolant supply

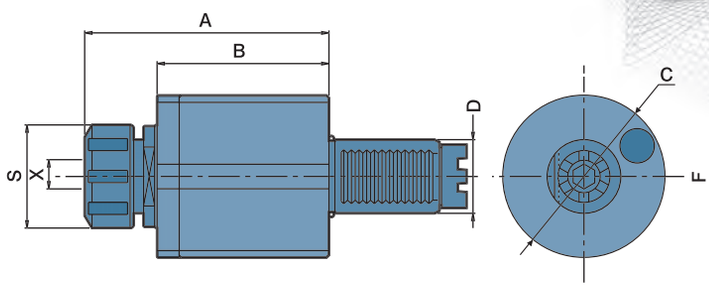
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	P DIN 5482	CODE NO.
DA30548220B	30	1-13 ER20	35	4000	1 : 1	±90°	64	59	54	32	27	67	B15X12	5006-102A

Axial Drilling And Milling Heads-For "Baruffaldi" Type

SPUR COUPLING-MT TYPE





- **Power Transmission According To "BARUFFALDI"**
- **MT: Frontal Transmission Coupling Gear is Fixed Version**

- To be used for collet DIN 6499
- External coolant supply
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
DA20MT16	20	1-10 ER16	30	6000	1 : 1	76	48	58	5006-103
DA30MT25	30	1-16 ER25	42	6000	1 : 1	86	55	68	5006-104
DA40MT32	40	2-20 ER32	50	6000	1 : 1	89	55	86	5006-105
DA50MT40	50	3-26 ER40	63	6000	1 : 1	118	81.5	96	5006-106

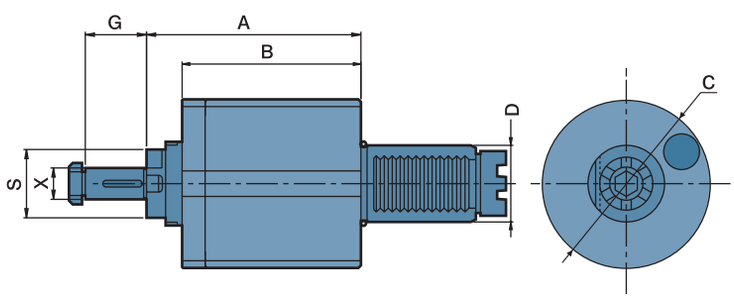
Axial Tapping Heads

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
TDA30MT16	30	1-10 ER16	30	3000	1 : 1	85	55	68	5006-107
TDA40MT20	40	1-13 ER20	35	3000	1 : 1	102	55	86	5006-108
TDA50MT25	50	1-16 ER25	42	3000	1 : 1	122	81.5	96	5006-109

Axial Milling Heads

SPUR COUPLING-MT TYPE



- External coolant and intermediate rings supply
- To be used for cutter arbor according to DIN 6358

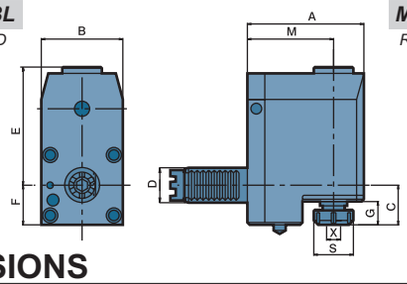
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	CODE NO.
DA30MT16C	30	16	32	3000	1 : 1	91.5	55	68	27	5006-110
DA40MT16C	40	16	32	3000	1 : 1	68.5	55	86	27	5006-111
DA40MT22C	40	22	32	3000	1 : 1	68.5	55	86	31	5006-112
DA50MT22C	50	22	40	3000	1 : 1	117	81.5	96	31	5006-113
DA50MT27C	50	27	40	3000	1 : 1	117	81.5	96	33	5006-114

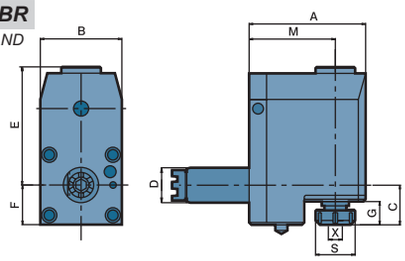
Radial Drilling And Milling Heads-Backwards

SPUR COUPLING-MT TYPE

MODE: BL
LEFT-HAND



MODE: BR
RIGHT-HAND



- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
BR20MT1657 BL20MT1657	20	1-10 ER16	30	5000	1 : 1	83	50	35	70	27	27	60	5006-115
BR30MT2569 BL30MT2569	30	1-16 ER25	42	5000	1 : 1	95	60	42	76	32	29	69	5006-116
BR40MT3290 BL40MT3290	40	2-20 ER32	50	5000	1 : 1	124	80	44	110	42	34	90	5006-117
BR50MT4090 BL50MT4090	50	3-26 ER40	63	5000	1 : 1	129	86	49	112	45	39	90	5006-118

Radial Tapping Heads-Backwards

DIMENSIONS

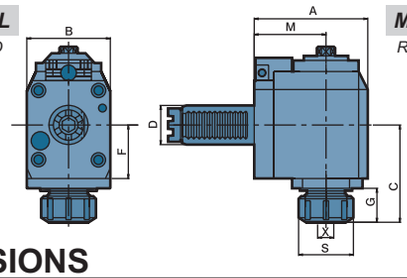
ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
TBR30MT1669 TBL30MT1669	30	1-10 ER16	30	3000	1 : 1	95	60	44	76	32	32	69	5006-119
TBR40MT2090 TBL40MT2090	40	1-13 ER20	35	3000	1 : 1	124	80	50	110	42	34	90	5006-120
TBR50MT2590 TBL50MT2590	50	1-16 ER25	42	3000	1 : 1	129	86	54	112	45	36	90	5006-121

Radial Drilling And Milling Heads

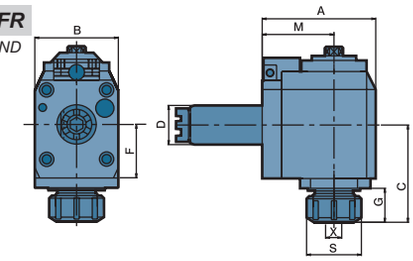
SET BACK

SPUR COUPLING-MT TYPE

MODE: FL
LEFT-HAND



MODE: FR
RIGHT-HAND



- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
FR30MT2565 FL30MT2565	30	1-16 ER25	42	5000	1 : 1	97	64	74.5	41	26	65	5006-122
FR30MT2585 FL30MT2585	30	1-16 ER25	42	5000	1 : 1	117	64	74.5	41	26	85	5006-123
FR40MT3265 FL40MT3265	40	2-20 ER32	50	5000	1 : 1	99	80	71	40	23	65	5006-124
FR40MT3285 FL40MT3285	40	2-20 ER32	50	5000	1 : 1	119	80	71	40	23	85	5006-125
FR40MT32100 FL40MT32100	40	2-20 ER32	50	5000	1 : 1	134	80	71	40	23	100	5006-126
FR50MT4075 FL50MT4075	50	3-26 ER40	60	5000	1 : 1	115	88	103	56	40	75	5006-127

Radial Tapping Heads

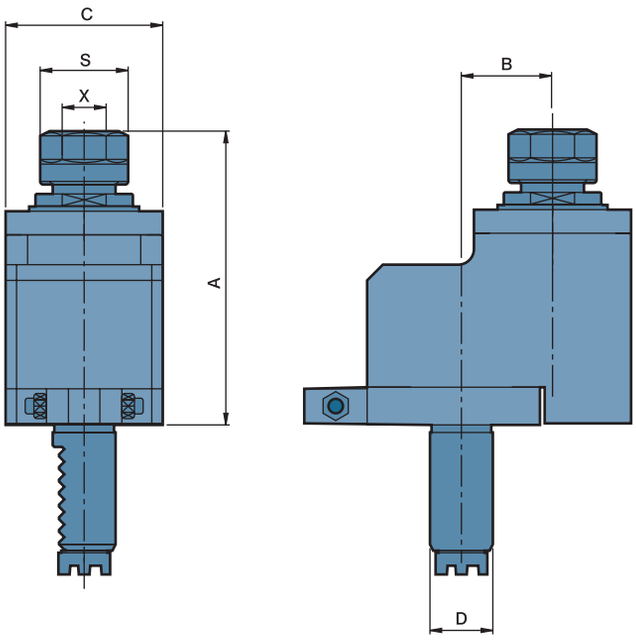
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
TFR30MT1665 TFL30MT1665	30	1-10 ER16	30	3000	1 : 1	97	64	75	41	30	65	5006-128
TFR30MT1685 TFL30MT1685	30	1-10 ER16	30	3000	1 : 1	117	64	75	41	30	85	5006-129
TFR40MT2065 TFL40MT2065	40	1-13 ER20	35	3000	1 : 1	99	80	70	40	25	65	5006-130
TFR40MT2085 TFL40MT2085	40	1-13 ER20	35	3000	1 : 1	119	80	70	40	25	85	5006-131
TFR50MT2575 TFL50MT2575	50	1-16 ER25	42	3000	1 : 1	115	88	103	56	42	75	5006-132

Axial Drilling And Milling Heads

OFFSET TYPE

SPUR COUPLING-MT TYPE



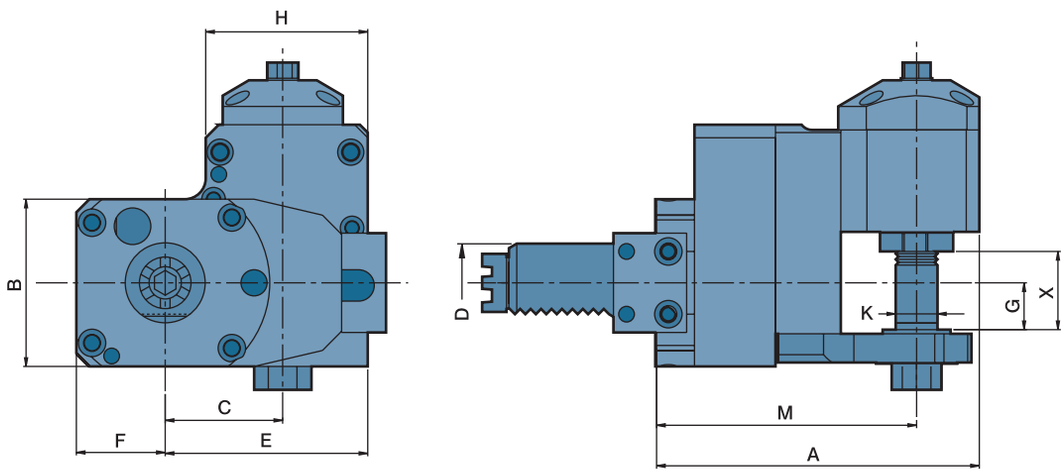
- Collet is not included
- External coolant supply
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
DA20MT1629	20	1-10 ER16	30	4000	1 : 1	93.5	29	50	5006-133
DA30MT2529	30	1-16 ER25	42	4000	1 : 1	100	29	60	5006-134
DA30MT2529/1	※ 30	2-20 ER32	42	8000	1 : 2	100	29	60	5006-135
DA40MT3250	40	2-20 ER32	50	4000	1 : 1	113	50	80	5006-136
DA50MT4065	50	3-26 ER40	63	3000	1 : 1	124	65	86	5006-137

Radial Milling Heads

SPUR COUPLING-MT TYPE



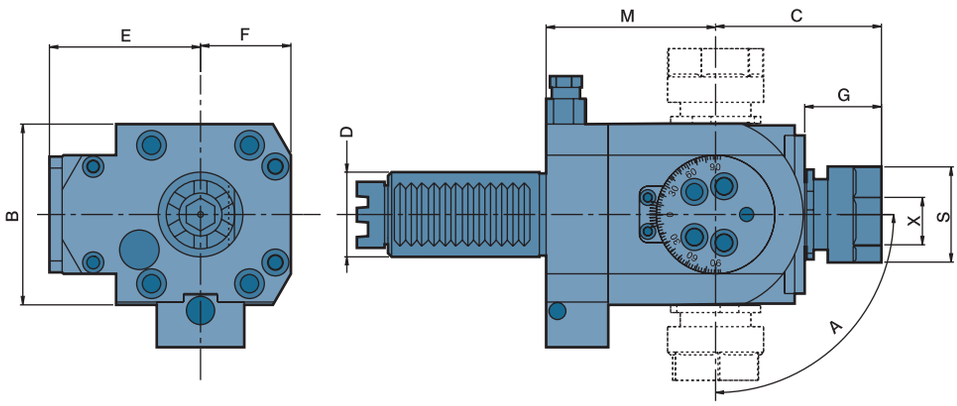
- External coolant supply

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	Maximum R.P.M.	i	A	B	C	E	F	G	H	K	M	CODE NO.
BR30MT16C/3 BL30MT16C/3	30	29	3000	3 : 1	124	64	45	77.5	34	18	62	16	100	5006-138

Angular Heads

SPUR COUPLING-MT TYPE



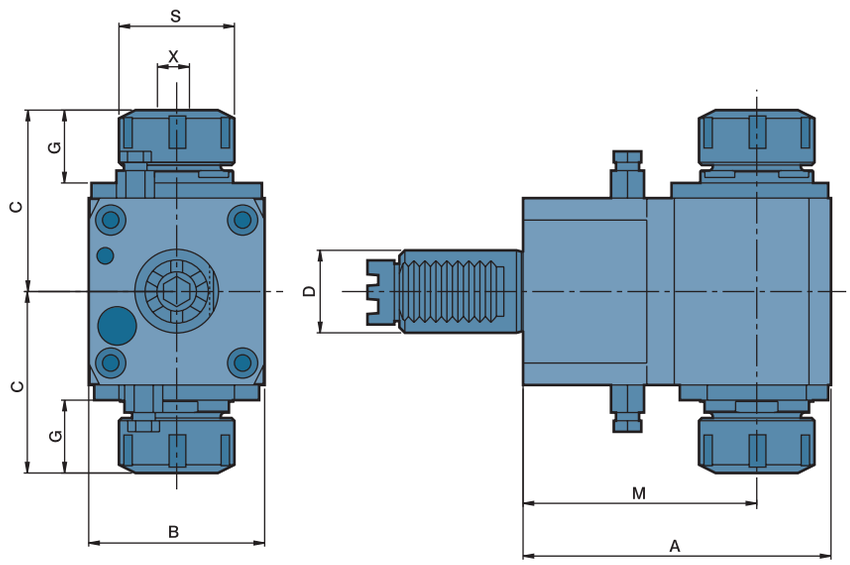
- To be used for collet DIN 6499
- External coolant supply
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
DA30MT20B	30	1-13 ER20	35	4000	1 : 1	±90º	64	59	54	32	27	67	5006-139A

Radial Drilling And Milling Heads

DOUBLE HEAD TYPE — SPUR COUPLING-MT TYPE



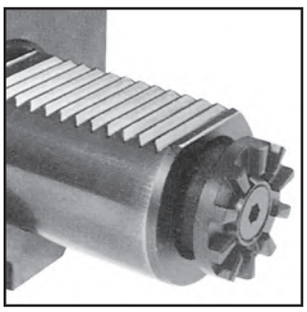
- To be used for collet DIN 6499
- External coolant supply
- Collet is not included

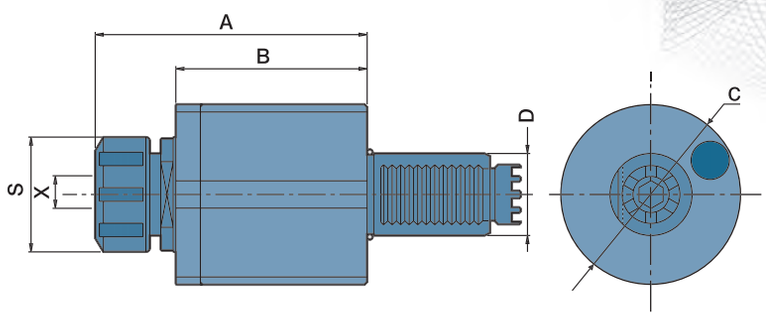
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	M	CODE NO.
DF30MT2585D	30	1-16 ER25	42	4000	1 : 1	112	64	66	27	85	5006-140
DF40MT3285D	40	2-20 ER32	50	4000	1 : 1	119	80	82	28	85	5006-141
DF40MT32100D	40	2-20 ER32	50	4000	1 : 1	134	80	82	28	100	5006-142

Axial Drilling And Milling Heads-For "Duplomatic" Type

SPUR COUPLING-IT TYPE





- **Power Transmission According To "DUPLOMATIC"**
- **IT: Fron-side Coupling is Elastic Stroke**

- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
DA30IT25	30	1-16 ER25	42	6000	1 : 1	86	55	68	5006-143
DA40IT32	40	2-20 ER32	50	6000	1 : 1	89	55	86	5006-144

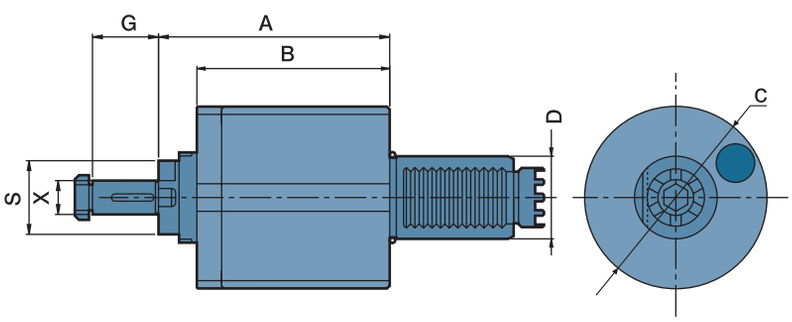
Axial Tapping Heads

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	CODE NO.
TDA30IT16	30	1-10 ER16	30	3000	1 : 1	85	55	68	5006-146
TDA40IT20	40	1-13 ER20	35	3000	1 : 1	102	55	86	5006-147

Axial Milling Heads

SPUR COUPLING-IT TYPE



- To be used for cutter arbor according to DIN 6358
- External coolant and intermediate rings supply

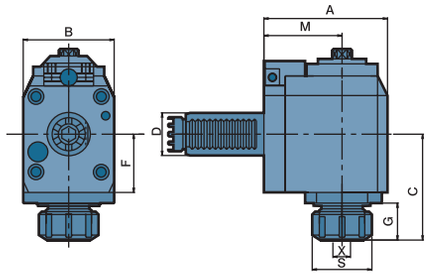
DIMENSIONS

ORDER NO.	D DIN 69880	X DIN 6358	S	Maximum R.P.M.	i	A	B	C	G	CODE NO.
DA30IT16C	30	16	32	3000	1 : 1	91.5	55	68	27	5006-149
DA40IT16C	40	16	32	3000	1 : 1	68.5	55	86	27	5006-150
DA40IT22C	40	22	32	3000	1 : 1	68.5	55	86	31	5006-151

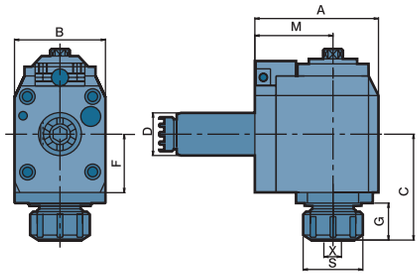
Radial Drilling And Milling Heads

SPUR COUPLING-IT TYPE

MODE: FL
LEFT-HAND



MODE: FR
RIGHT-HAND



- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
FR30IT2565 FL30IT2565	30	1-16 ER25	42	5000	1 : 1	97	64	74.5	41	26	65	5006-154
FR30IT2585 FL30IT2585	30	1-16 ER25	42	5000	1 : 1	117	64	74.5	41	26	85	5006-155
FR40IT3265 FL40IT3265	40	2-20 ER32	50	5000	1 : 1	99	80	71	40	23	65	5006-156
FR40IT3285 FL40IT3285	40	2-20 ER32	50	5000	1 : 1	119	80	71	40	23	85	5006-157
FR40IT32100 FL40IT32100	40	2-20 ER32	50	5000	1 : 1	134	80	71	40	23	100	5006-158

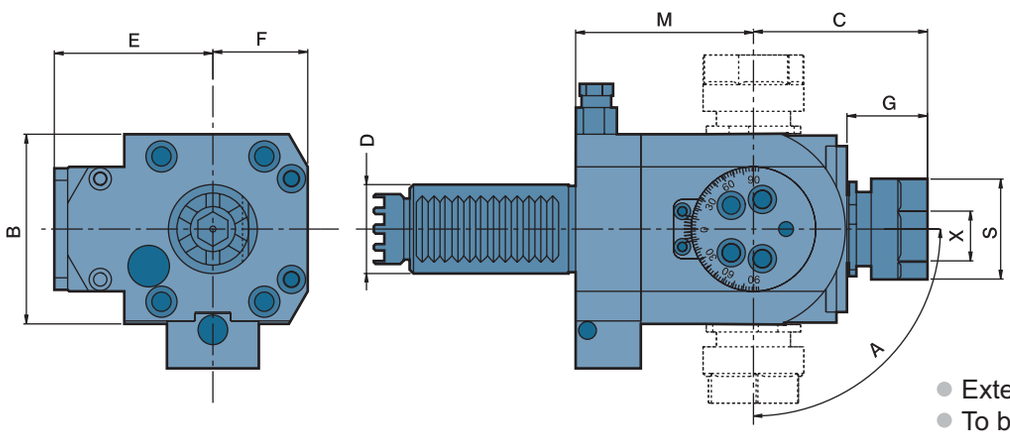
Radial Tapping Heads

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	F	G	M	CODE NO.
TFR30IT1665 TFL30IT1665	30	1-10 ER16	30	3000	1 : 1	97	64	75	41	30	65	5006-160
TFR30IT1685 TFL30IT1685	30	1-10 ER16	30	3000	1 : 1	117	64	75	41	30	85	5006-161
TFR40IT2065 TFL40IT2065	40	1-13 ER20	35	3000	1 : 1	99	80	70	40	25	65	5006-162
TFR40IT2085 TFL40IT2085	40	1-13 ER20	35	3000	1 : 1	119	80	70	40	25	85	5006-163

Angular Heads

SPUR COUPLING-IT TYPE



- External coolant supply
- To be used for collet DIN 6499
- Collet is not included

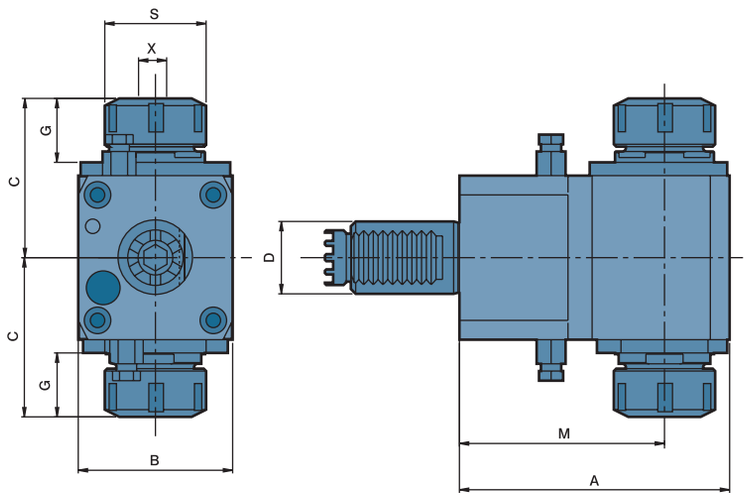
DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	E	F	G	M	CODE NO.
DA30IT20B	30	1-13 ER20	35	4000	1 : 1	±90°	64	59	54	32	27	67	5006-165A

Other shank dimensions under development

Radial Drilling And Milling Heads

DOUBLE COLLETS — SPUR COUPLING-IT TYPE



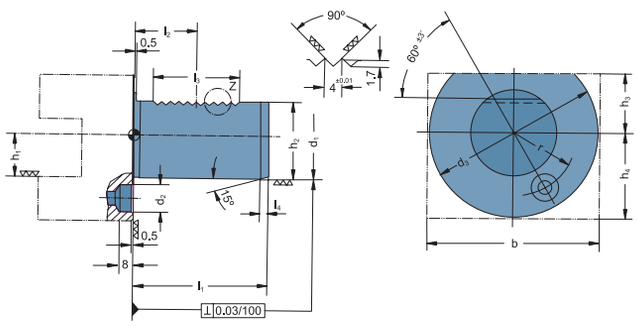
- Collet is not included
- External coolant supply
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	D DIN 69880	X Capacity	S	Maximum R.P.M.	i	A	B	C	G	M	CODE NO.
DF30IT2585D	30	1-16 ER25	42	4000	1 : 1	112	64	66	26.5	85	5006-166
DF40IT3285D	40	2-20 ER32	50	4000	1 : 1	119	80	82	28	85	5006-167
DF40IT32100D	40	2-20 ER32	50	4000	1 : 1	134	80	82	28	100	5006-168

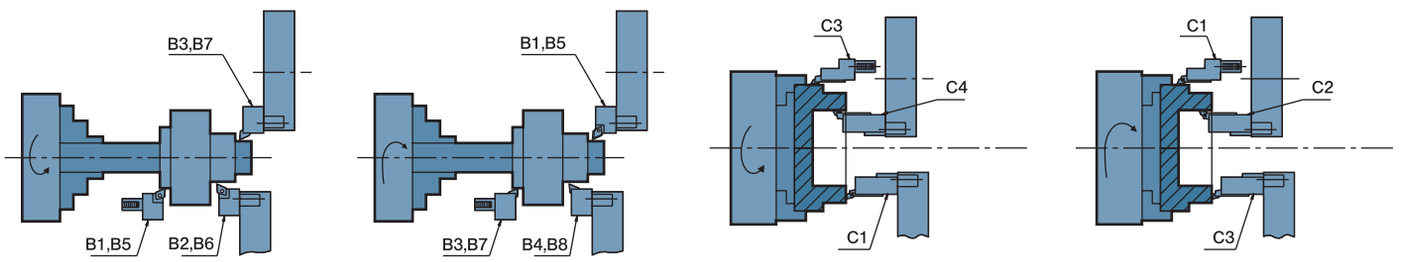
Other shank dimensions under development

VDI Dimensional Specification of Shank DIN 69880



DIMENSIONS

d1 h6	l1 ±0.3	d2		d3	h1 max	h2 ±0.1	l2 ±0.05	l3 min	l4 +1	r4 ±0.02
20	40	10	H6	50	16	18	21.7	24	2	18
30	55	14	H9	68	20	27	29.7	40	2	25
40	63	14	H9	83	25	36	29.7	40	3	32
50	78	16	H9	98	32	45	35.7	48	3	37
60	94	16	H9	123	32	55	43.7	56	4	48



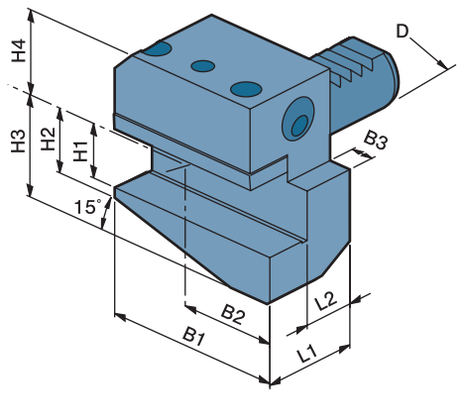
Radial Static Holders

B1 B2 TYPE

DIN 69880

B1

- Short
- External Coolant Supply
- Right-hand

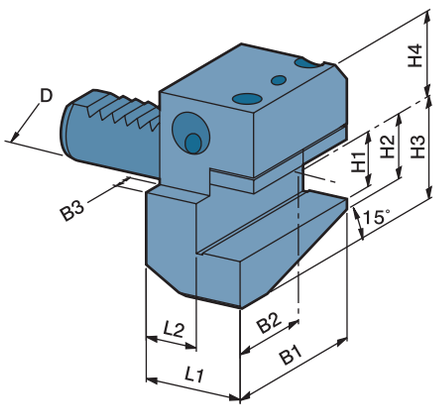


DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B1-20x16	20	55	30	7	16	19	30	25	30	16	5006-180
B1-30x20	30	70	35	10	20	26	38	28	40	22	5006-181
B1-40x25	40	85	42.5	12.5	25	35	48	32.5	44	22	5006-182
B1-50x32	50	100	50	16	32	42	60	35	55	30	5006-183
B1-60x32	60	125	62.5	16	32	46	62.5	42.5	60	30	5006-184

B2

- Left-hand
- External Coolant Supply
- Short



DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B2-20x16	20	55	30	7	16	19	30	25	30	16	5006-185
B2-30x20	30	70	35	10	20	26	38	28	40	22	5006-186
B2-40x25	40	85	42.5	12.5	25	35	48	32.5	44	22	5006-187
B2-50x32	50	100	50	16	32	42	60	35	55	30	5006-188
B2-60x32	60	125	62.5	16	32	46	62.5	42.5	60	30	5006-189

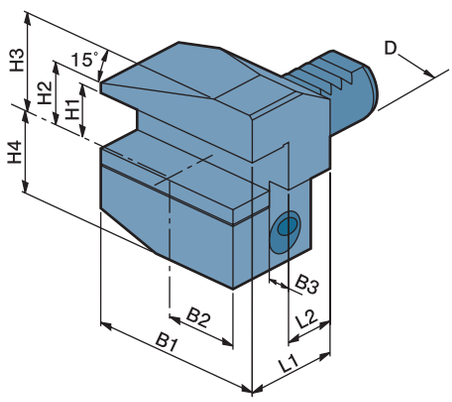
Radial Static Holders

B3 B4 TYPE

DIN 69880

B3

- Short
- External Coolant Supply
- Right-hand

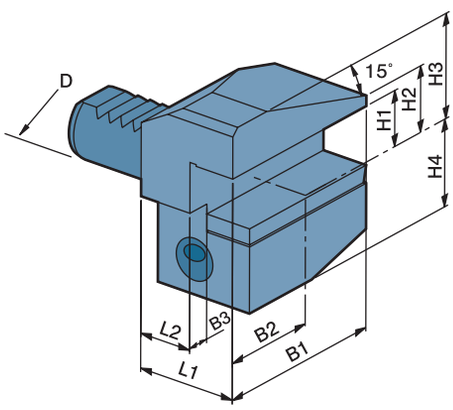


DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B3-20x16	20	55	30	7	16	19	30	25	30	16	5006-190
B3-30x20	30	70	35	10	20	22	38	35	40	22	5006-191
B3-40x25	40	85	42.5	12.5	25	30	48	42.5	44	22	5006-192
B3-50x32	50	100	50	16	32	35	60	50	55	30	5006-193
B3-60x32	60	125	62.5	16	32	42.5	62.5	42.5	60	30	5006-194

B4

- Left-hand
- External Coolant Supply
- Short



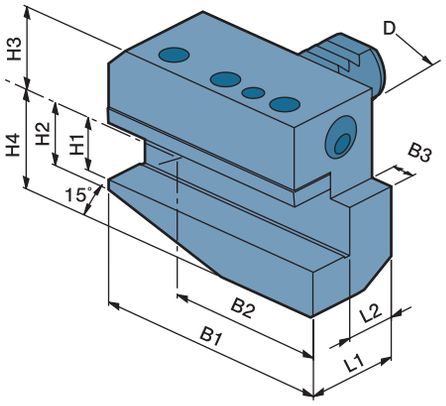
DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B4-20x16	20	55	30	7	16	19	30	25	30	16	5006-195
B4-30x20	30	70	35	10	20	22	38	35	40	22	5006-196
B4-40x25	40	85	42.5	12.5	25	30	48	42.5	44	22	5006-197
B4-50x32	50	100	50	16	32	35	60	50	55	30	5006-198
B4-60x32	60	125	62.5	16	32	42.5	62.5	42.5	60	30	5006-199

Radial Static Holders

B5 B6 TYPE

DIN 69880

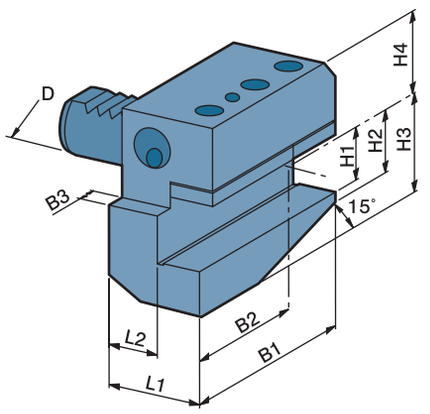


B5

- External Coolant Supply
- Right-hand
- Long

DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B5-20x16	20	75	50	7	16	19	30	25	30	16	5006-200
B5-30x20	30	100	65	10	20	26	38	28	40	22	5006-201
B5-40x25	40	118	76	12.5	25	35	48	32.5	44	22	5006-202
B5-50x32	50	130	80	16	32	42	60	35	55	30	5006-203
B5-60x32	60	145	83	16	32	46	62.5	42.5	60	30	5006-204



B6

- Left-hand
- External Coolant Supply
- Long

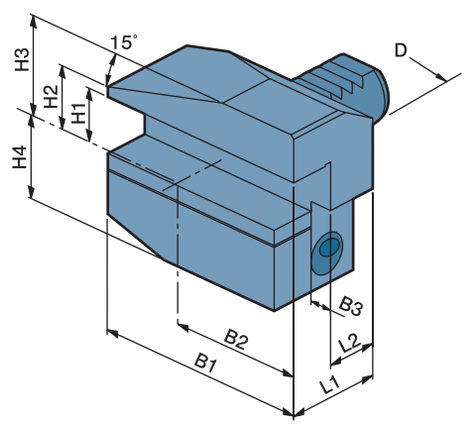
DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B6-20x16	20	75	50	7	16	19	30	25	30	16	5006-205
B6-30x20	30	100	65	10	20	26	38	28	40	22	5006-206
B6-40x25	40	118	76	12.5	25	35	48	32.5	44	22	5006-207
B6-50x32	50	130	80	16	32	42	60	35	55	30	5006-208
B6-60x32	60	145	83	16	32	46	62.5	42.5	60	30	5006-209

Radial Static Holders

B7 B8 TYPE

DIN 69880

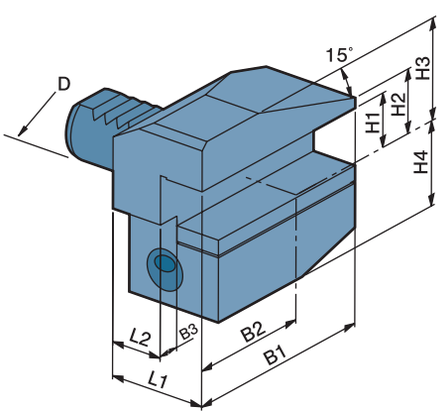


B7

- External Coolant Supply
- Right-hand
- Long

DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B7-20x16	20	75	50	7	16	19	30	25	30	16	5006-210
B7-30x20	30	100	65	10	20	22	38	35	40	22	5006-211
B7-40x25	40	118	75.5	12.5	25	30	48	42.5	44	22	5006-212
B7-50x32	50	130	80	16	32	35	60	50	55	30	5006-213
B7-60x32	60	145	82.5	16	32	42.5	62.5	42.5	60	30	5006-214



B8

- Left-hand
- External Coolant Supply
- Long

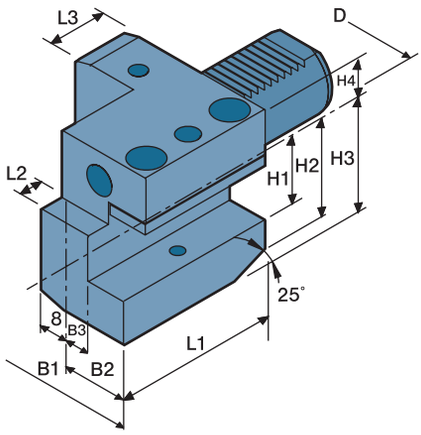
DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
B8-20x16	20	75	50	7	16	19	30	25	30	16	5006-215
B8-30x20	30	100	65	10	20	22	38	35	40	22	5006-216
B8-40x25	40	118	75.5	12.5	25	30	48	42.5	44	22	5006-217
B8-50x32	50	130	80	16	32	35	60	50	55	30	5006-218
B8-60x32	60	145	82.5	16	32	42.5	62.5	42.5	60	30	5006-219

Axial Static Holders

C1 C2 TYPE

DIN 69880

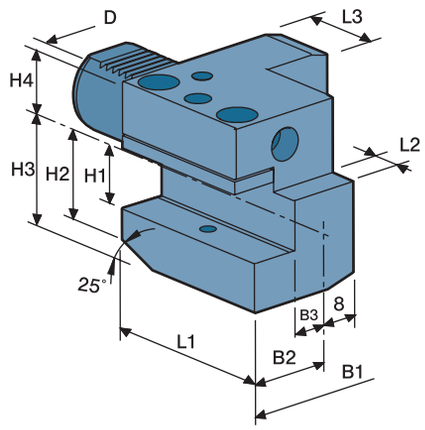


C1

- Right-hand
- External Coolant Supply

DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	L3	CODE NO.
C1-20x16	20	65	40	26	16	23	30	25	50	7	30	5006-220
C1-30x20	30	70	35	17	20	28	38	28	70	10	30	5006-221
C1-40x25	40	85	42.5	21	25	-	48	32.5	85	12.5	30	5006-222
C1-50x32	50	100	50	26	32	-	60	35	100	16	40	5006-223
C1-60x32	60	125	62.5	33	32	-	62.5	42.5	125	16	40	5006-224



C2

- External Coolant Supply
- Left-hand

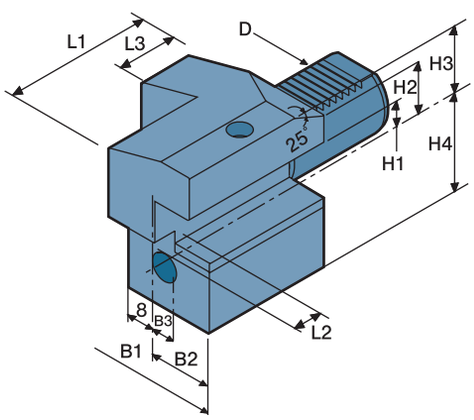
DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	L 3	CODE NO.
C2-20x16	20	65	40	26	16	23	30	25	50	7	30	5006-225
C2-30x20	30	76	41	23	20	28	38	28	70	10	30	5006-226
C2-40x25	40	90	47.5	25.5	25	-	48	32.5	85	12.5	30	5006-227
C2-50x32	50	105	55	30.5	32	-	60	35	100	16	40	5006-228
C2-60x32	60	125	62.5	33	32	-	62.5	42.5	125	16	40	5006-229

Axial Static Holders

C3 C4 TYPE

DIN 69880

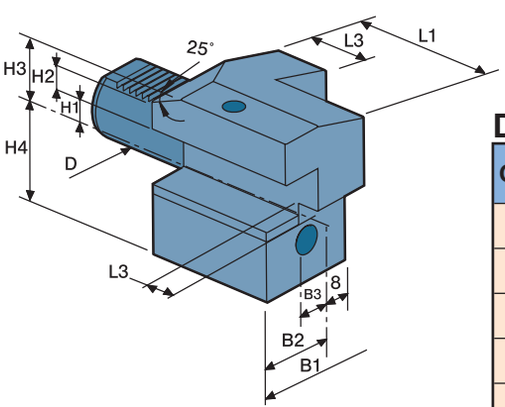


C3

- Right-hand
- External Coolant Supply

DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	L3	CODE NO.
C3-20x16	20	65	40	26	16	23	30	25	50	7	30	5006-230
C3-30x20	30	70	35	17	20	28	38	35	70	10	30	5006-231
C3-40x25	40	85	42.5	21	25	-	48	42.5	85	12.5	30	5006-232
C3-50x32	50	100	50	26	32	-	60	50	100	16	40	5006-233
C3-60x32	60	125	62.5	33	32	-	62.5	62.5	125	16	40	5006-234



C4

- External Coolant Supply
- Left-hand

DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	L3	CODE NO.
C4-20x16	20	65	40	26	16	23	30	25	50	7	30	5006-235
C4-30x20	30	76	41	23	20	28	38	35	70	10	30	5006-236
C4-40x25	40	90	47.5	25.5	25	-	48	42.5	85	12.5	30	5006-237
C4-50x32	50	105	55	30.5	32	-	60	50	100	16	40	5006-238
C4-60x32	60	125	62.5	33	32	-	62.5	62.5	125	16	40	5006-239

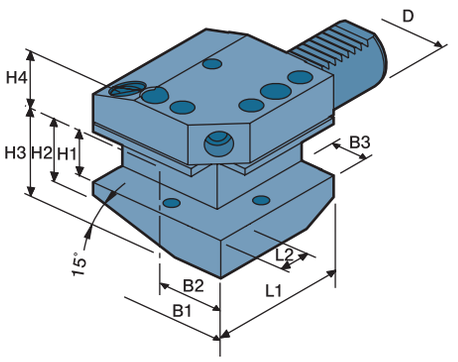
Combined Static Holders

CB1 CB2 TYPE

DIN 69880

CB1

- External Coolant Supply
- Right-hand

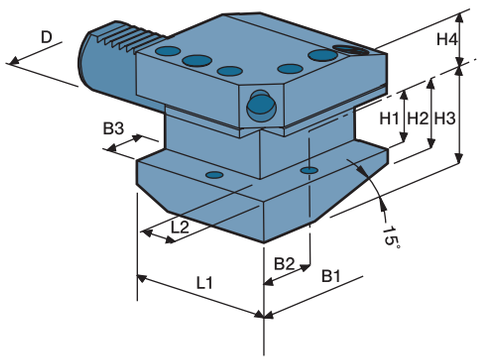


DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
CB1-20x16	20	65	40	14	16	19	30	25	50	14	5006-240
CB1-30x20	30	74	40	18	20	26	38	28	70	18	5006-241
CB1-40x25	40	85	45	22	25	35	48	32.5	100	22	5006-242
CB1-50x32	50	105	55	25	32	42	60	35	120	25	5006-243
CB1-60x32	60	125	62.5	30	32	46	62.5	42.5	135	30	5006-244

CB2

- Left-hand
- External Coolant Supply



DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
CB2-20x16	20	65	40	14	16	19	30	25	50	14	5006-245
CB2-30x20	30	74	40	18	20	26	38	28	70	18	5006-246
CB2-40x25	40	85	47	22	25	35	48	32.5	100	22	5006-247
CB2-50x32	50	105	55	25	32	42	60	35	120	25	5006-248
CB2-60x32	60	125	62.5	30	32	46	62.5	42.5	135	30	5006-249

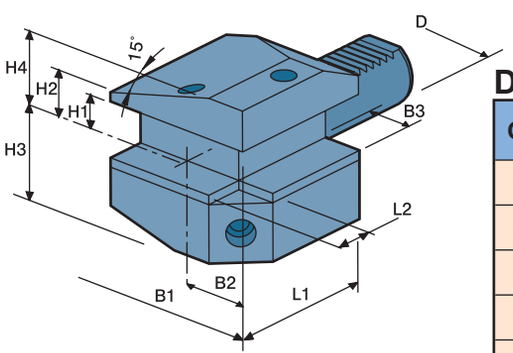
Combined Static Holders

CB3 CB4 TYPE

DIN 69880

CB3

- External Coolant Supply
- Right-hand

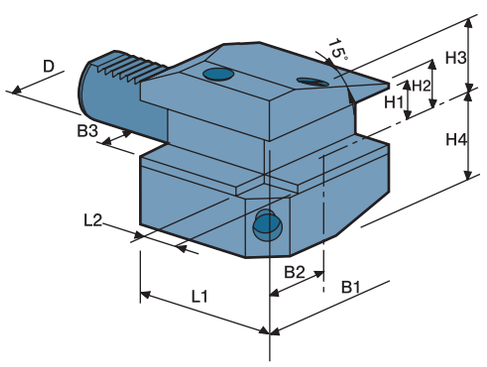


DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
CB3-20x16	20	65	40	14	16	19	30	25	50	14	5006-250
CB3-30x20	30	74	40	18	20	22	38	28	70	18	5006-251
CB3-40x25	40	85	45	22	25	30	48	32.5	100	22	5006-252
CB3-50x32	50	105	55	25	32	35	60	35	120	25	5006-253
CB3-60x32	60	125	62.5	30	32	42.5	62.5	42.5	135	30	5006-254

CB4

- Left-hand
- External Coolant Supply



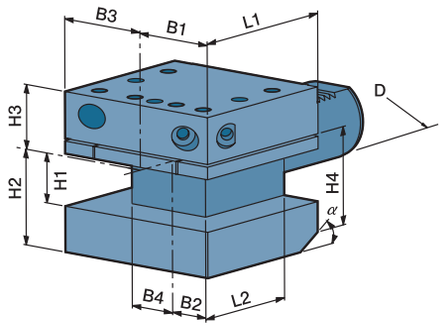
DIMENSIONS

ORDER NO.	D	B1	B2	B3	H1	H2	H3	H4	L1	L2	CODE NO.
CB4-20x16	20	65	40	14	16	19	30	25	50	14	5006-255
CB4-30x20	30	74	40	18	20	22	38	28	70	18	5006-256
CB4-40x25	40	85	47	22	25	30	48	32.5	100	22	5006-257
CB4-50x32	50	105	55	25	32	35	60	35	120	25	5006-258
CB4-60x32	60	125	62.5	30	32	42.5	62.5	42.5	135	30	5006-259

Combined Static Holders

D1 D2 TYPE

DIN 69880

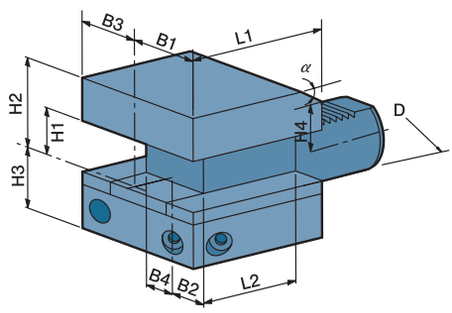


D1

- Right-hand
- External Coolant Supply

DIMENSIONS

ORDER NO.	D	B1	B2	B3	B4	H1	H2	H3	H4	L1	L2	α	CODE NO.
D1-30x20	30	35	17	41	23	20	38	35	30	60	42	25º	5006-260
D1-40x25	40	42.5	21	47.5	25.5	25	48	42.5	40	72	50	25º	5006-261
D1-50x32	50	50	26	55	30.5	32	60	50	-	85	60	-	5006-262
D1-60x32	60	57.5	33	57.5	33	32	62.5	62.5	-	110	85	-	5006-263



D2

- Left-hand
- External Coolant Supply

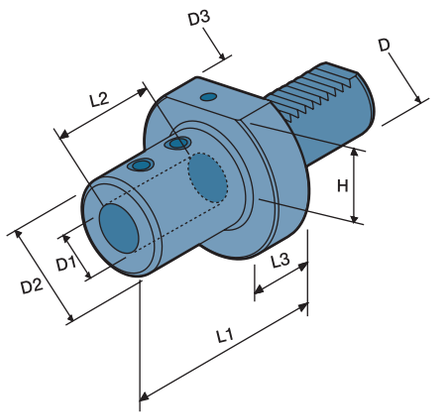
DIMENSIONS

ORDER NO.	D	B1	B2	B3	B4	H1	H2	H3	H4	L1	L2	α	CODE NO.
D2-30x20	30	35	17	41	23	20	38	35	30	60	42	25º	5006-264
D2-40x25	40	42.5	21	47.5	25.5	25	48	42.5	40	72	50	25º	5006-265
D2-50x32	50	50	26	55	30.5	32	60	50	-	85	60	-	5006-266
D2-60x32	60	57.5	33	57.5	33	32	62.5	62.5	-	110	85	-	5006-267

Static Holders

E1 TYPE

DIN 69880



E1

- Internal Coolant Supply
- U Drills

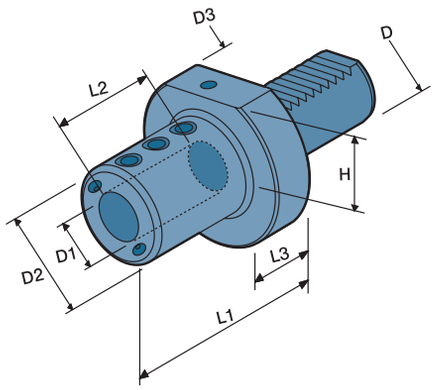
DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	L3	CODE NO.
E1-20x20	20	20	40	50	-	67	57	18	5006-268
E1-20x25	20	25	45	50	-	71	59	18	5006-269
E1-30x20	30	20	40	68	28	67	54	22	5006-270
E1-30x25	30	25	45	68	28	71	59	22	5006-271
E1-30x32	30	32	52	68	28	75	63	22	5006-272
E1-40x20	40	20	40	83	32.5	67	54	22	5006-273
E1-40x25	40	25	45	83	32.5	75	59	22	5006-274
E1-40x32	40	32	52	83	32.5	75	63	22	5006-275
E1-40x40	40	40	60	83	32.5	90	73	22	5006-276
E1-50x20	50	20	40	98	35	67	54	30	5006-277
E1-50x25	50	25	45	98	35	80	59	30	5006-278
E1-50x32	50	32	52	98	35	80	63	30	5006-279
E1-50x40	50	40	60	98	35	90	73	30	5006-280
E1-50x50	50	50	70	98	35	100	83	30	5006-281

Static Holders

E2 TYPE

DIN 69880



E2

- Boring Bar Holder
- External Coolant Supply

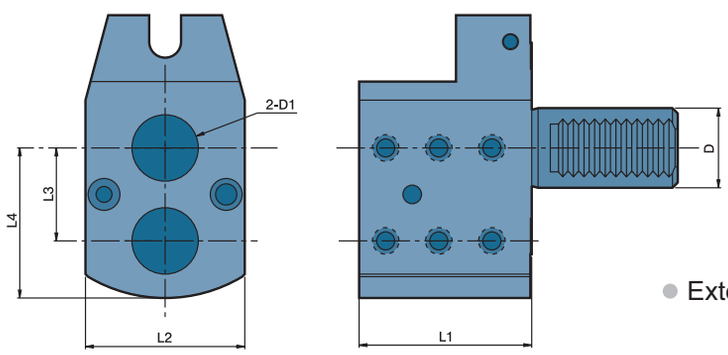
DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	L3	CODE NO.
E2-20x8	20	8	40	50	-	50	41	18	5006-282
E2-20x10	20	10	40	50	-	50	41	18	5006-283
E2-20x12	20	12	40	50	-	50	41	18	5006-284
E2-20x16	20	16	40	50	-	50	41	18	5006-285
E2-20x20	20	20	50	50	-	50	41	-	5006-286
E2-20x25	20	25	50	50	-	60	41	-	5006-287
E2-30x8	30	8	50	68	28	60	51	22	5006-288
E2-30x10	30	10	50	68	28	60	51	22	5006-289
E2-30x12	30	12	50	68	28	60	51	22	5006-290
E2-30x16	30	16	55	68	28	60	51	22	5006-291
E2-30x20	30	20	58	68	28	60	51	22	5006-292
E2-30x25	30	25	62	68	28	60	51	22	5006-293
E2-30x32	30	32	68	68	28	75	61	-	5006-294
E2-40x10	40	10	50	83	32.5	75	61	22	5006-295
E2-40x12	40	12	50	83	32.5	75	61	22	5006-296
E2-40x16	40	16	56	83	32.5	75	61	22	5006-297
E2-40x20	40	20	56	83	32.5	75	61	22	5006-298
E2-40x25	40	25	62	83	32.5	75	61	22	5006-299
E2-40x32	40	32	72	83	32.5	75	61	22	5006-300
E2-40x40	40	40	83	83	32.5	85	76	-	5006-301
E2-50x10	50	10	50	98	35	90	76	30	5006-302
E2-50x12	50	12	56	98	35	90	76	30	5006-303
E2-50x16	50	16	56	98	35	90	76	30	5006-304
E2-50x20	50	20	62	98	35	90	76	30	5006-305
E2-50x25	50	25	72	98	35	90	76	30	5006-306
E2-50x32	50	32	72	98	35	90	76	30	5006-307
E2-50x40	50	40	80	98	35	90	76	30	5006-308
E2-50x50	50	50	90	98	35	95	86	30	5006-309
E2-60x10	60	10	68	123	42.5	90	76	35	5006-310
E2-60x12	60	12	68	123	42.5	90	76	35	5006-311
E2-60x16	60	16	68	123	42.5	90	76	35	5006-312
E2-60x20	60	20	68	123	42.5	90	76	35	5006-313
E2-60x25	60	25	68	123	42.5	90	76	35	5006-314
E2-60x32	60	32	68	123	42.5	90	76	35	5006-315
E2-60x40	60	40	98	123	42.5	90	76	35	5006-316
E2-60x50	60	50	98	123	42.5	95	86	35	5006-317

Static Holders

E2-X2 TYPE

DIN 69880



- External, internal coolant supply

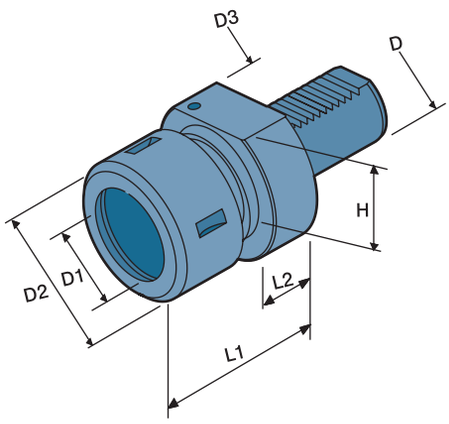
DIMENSIONS

ORDER NO.	D DIN 69880	D1	L1	L2	L3	L4	CODE NO.
E2-30-2X25-35	30	25	65	60	35	56.5	5006-318
E2-40-2X40-65	40	40	80	80	65	91.5	5006-319

Static Holders

E3 E4 TYPE

DIN 69880

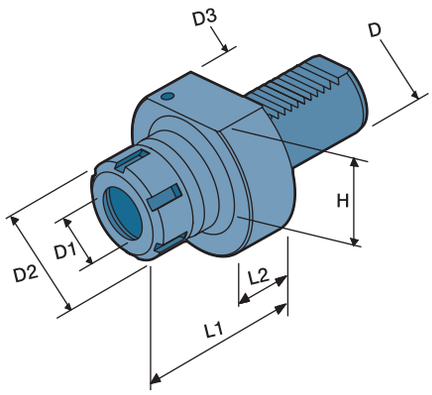


E3

- For Collet DIN 6388
- External Coolant Supply

DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	CODE NO.
E3-30-OZ25	30	2-25	60	68	28	75	22	5006-320
E3-40-OZ25	40	2-25	60	83	32.5	75	22	5006-321
E3-40-OZ32	40	4-32	78	83	32.5	90	22	5006-322
E3-50-OZ25	50	2-25	60	98	35	75	30	5006-323
E3-50-OZ32	50	4-32	78	98	35	90	30	5006-324



E4

- External Coolant Supply
- For Collet DIN 6499

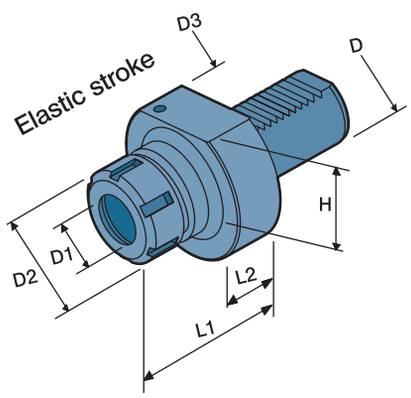
DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	CODE NO.
E4-20-ER25	20	1-16	42	50	-	50	18	5006-325
E4-30-ER25	30	1-16	42	68	28	53	22	5006-326
E4-30-ER32	30	2-20	50	68	28	57	22	5006-327
E4-40-ER32	40	2-20	50	83	32.5	62	22	5006-328
E4-40-ER40	40	3-26	63	83	32.5	75	22	5006-329
E4-50-ER40	50	3-26	63	98	35	75	30	5006-330
E4-60-ER40	60	3-26	63	123	42.5	75	30	5006-331
E4-60-ER50	60	10-34	78	123	42.5	75	30	5006-332

Static Holders

TAPPER, CHUCK TYPE

DIN 69880

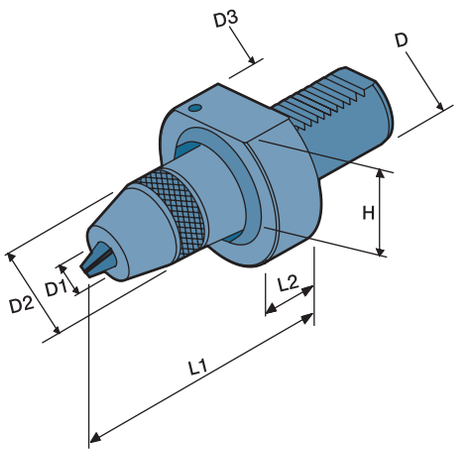


TAPPER

- External Coolant Supply
- For Collet DIN 6499

DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	CODE NO.
TAP-20-ER20	20	1-13	34	50	-	60	18	5006-333
TAP-30-ER25	30	1-16	42	68	28	68	22	5006-334
TAP-40-ER25	40	1-16	42	83	32.5	73	22	5006-335
TAP-50-ER32	50	2-20	50	98	35	83	30	5006-336
TAP-60-ER32	60	2-20	50	123	42.5	85	30	5006-337



KEYLESS DRILL CHUCK

- External Coolant Supply

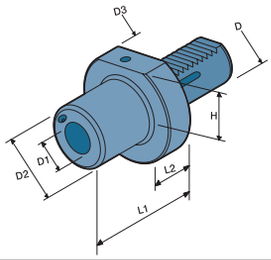
DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	CODE NO.
CHUCK-30-13	30	1-13	51	68	28	85	22	5006-338
CHUCK-40-13	40	1-13	51	83	32.5	85	22	5006-339
CHUCK-40-16	40	3-16	58	83	32.5	90	22	5006-340
CHUCK-50-13	50	1-13	51	98	35	85	30	5006-341
CHUCK-50-16	50	3-16	58	98	35	90	30	5006-342

Static Holders

F TYPE

DIN 69880



- Tool holders with morse taper according DIN 228
- External Coolant Supply

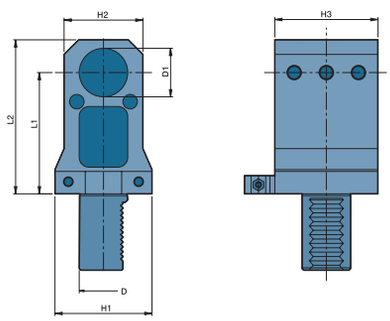
DIMENSIONS

ORDER NO.	D	D1	D2	D3	H	L1	L2	CODE NO.
F20-MT1	20	MT1	-	50	-	23	-	5006-343
F30-MT1	30	MT1	52	68	28	27	22	5006-344
F30-MT2	30	MT2	58	68	28	43	22	5006-345
F30-MT3	30	MT3	64	68	28	66	22	5006-346
F40-MT2	40	MT2	66	83	32.5	43	22	5006-347
F40-MT3	40	MT3	72	83	32.5	58	22	5006-348
F40-MT4	40	MT4	72	83	32.5	78	22	5006-349
F50-MT2	50	MT2	55	98	35	36	30	5006-350
F50-MT3	50	MT3	60	98	35	44	30	5006-351
F50-MT4	50	MT4	70	98	35	71	30	5006-352
F60-MT3	60	MT3	58	123	42.5	36	30	5006-353
F60-MT4	60	MT4	68	123	42.5	50	30	5006-354

Axial Static Holders

T1 TYPE

DIN 69880



- External, internal coolant supply

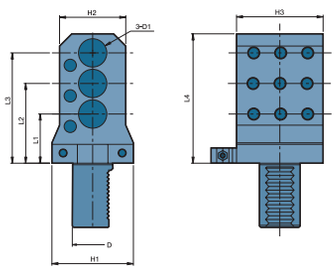
DIMENSIONS

ORDER NO.	D	D1	H1	H2	H3	L1	L2	CODE NO.
T1-30-32-65	30	32	65	52	62	65	90	5006-355
T1-30-32-85	30	32	65	52	62	85	108	5006-356
T1-30-32-100	30	32	65	52	62	100	123	5006-357
T1-30-32-120	30	32	65	52	62	120	143	5006-358
T1-40-32-85	40	32	80	65	85	85	112	5006-359
T1-40-40-85	40	40	80	65	85	85	112	5006-360
T1-40-40-100	40	40	80	65	85	100	127	5006-361

Axial Static Holders

T1-X3 TYPE

DIN 69880



- External coolant supply

DIMENSIONS

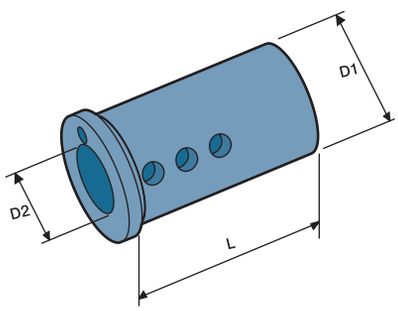
ORDER NO.	D	D1	H1	H2	H3	L1	L2	L3	L4	CODE NO.
T1-30-3X25	30	25	65	65	62	42	85	128	148	5006-362

Reducing Sleeves

RS-W, RS TYPE

RS-W

- External Coolant Supply
- For Boring Bar Holder

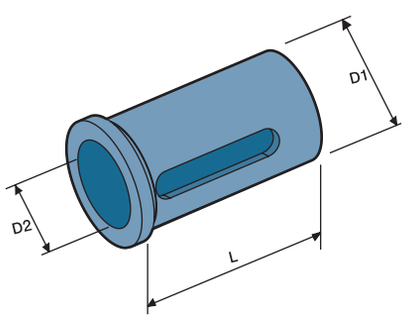


DIMENSIONS

D1	L	ORDER NO. D2	CODE NO.
20	45	**E20-8**	5006-370
		E20-10	5006-371
25	55	**E25-8**	5006-373
		E25-10	5006-374
		E25-12	5006-375
32	60	**E32-8**	5006-377
		E32-10	5006-378
		E32-12	5006-379
40	75	**E40-8**	5006-382
		E40-10	5006-383
		E40-12	5006-384
50	85	**E50-8**	5006-388
		E50-10	5006-389
		E50-12	5006-390
		E50-16	5006-391
		E50-20	5006-392
		E50-25	5006-393

RS

- For Boring Bar Holder

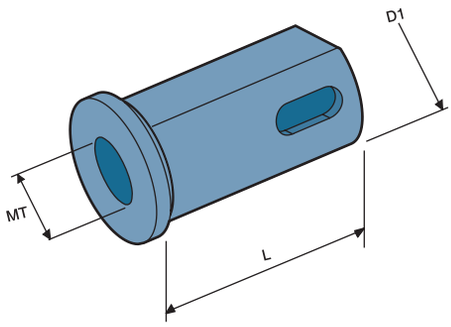


DIMENSIONS

D1	L	ORDER NO. D2	CODE NO.
20	50	**E20-12-K**	5006-399
		E20-16-K	5006-400
25	50	**E25-16-K**	5006-401A
		E25-20-K	5006-401
32	60	**E32-16-K**	5006-402A
		E32-20-K	5006-402B
		E32-25-K	5006-402
40	75	**E40-16-K**	5006-403A
		E40-20-K	5006-403B
		E40-25-K	5006-403C
		E40-32-K	5006-403
50	85	**E50-32-K**	5006-404A
		E50-40-K	5006-404

Reducing Sleeves

RS-MT, TE TYPE

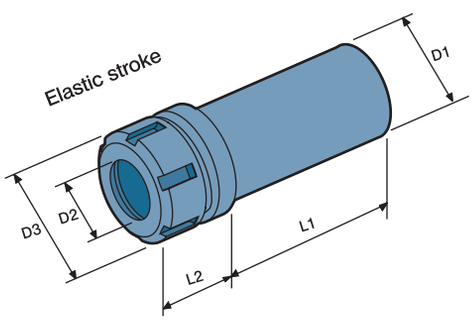


RS-MT

- Tool holders with morse taper according to DIN 228

DIMENSIONS

D1	L	MT				
		1	2	3	4	
32	60	E32-MT1	E32-MT2	E32-MT3		ORDER NO.
		5006-410	5006-411	5006-412		CODE NO.
40	75	E40-MT1	E40-MT2	E40-MT3	E40-MT4	ORDER NO.
		5006-414	5006-415	5006-416	5006-417	CODE NO.
50	85	E50-MT1	E50-MT2	E50-MT3	E50-MT4	ORDER NO.
		5006-418	5006-419	5006-420	5006-421	CODE NO.



TE

- Auto taper with cylindric shaft
- To be used for collet DIN 6499

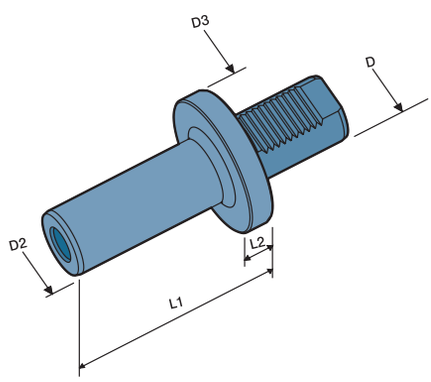
DIMENSIONS

ORDER NO.	D1	D2		D3	L1	L2	CODE NO.
TE25-ER16	25	1-10	M3-M12	ER16 32	70.5	30	5006-430
TE32-ER20	32	2-13	M3-M16	ER20 35	65	40	5006-431
TE40-ER25	40	2-16	M4-M20	ER25 42	75	43	5006-432
TE50-ER32	50	3-20	M6-M24	ER32 50	85	48	5006-433

Test Mandrel

TB1 TYPE

DIN 69880



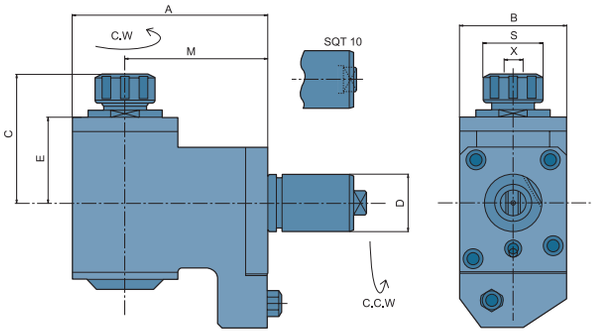
DIMENSIONS

ORDER NO.	D DIN 69880	D2	D3	L1	L2	CODE NO.
TB1-30	30	30	68	115	15	5006-434
TB1-40	40	40	83	115	15	5006-435
TB1-50	50	50	98	115	15	5006-436

H Type Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE — FOR 1ST SPINDLE

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-HMD25	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-16 ER25	42	5000	137	75	90	60	100	5006-440
SQT 15/18-HMD25	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-16 ER25	42	5000	167	80	90	60	130	5006-441
SQT 15/18-HMD32			2-20 ER32	50	5000	167	80	92	60	130	5006-442

H Type Tapping Head

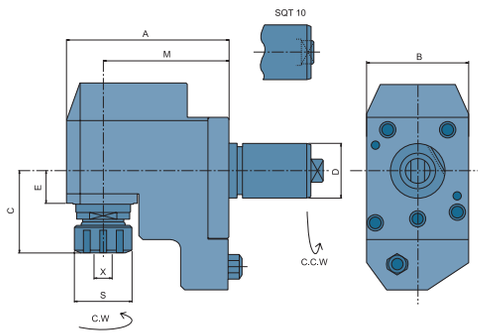
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-HT16	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-10 ER16	30	3000	137	75	106	60	100	5006-443
SQT 15/18-HT20	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-13 ER20	35	3000	167	80	108	60	130	5006-444

H Type Back Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE — FOR 2ND SPINDLE

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-HBMD25	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-16 ER25	42	5000	119	75	78	24.5	92	5006-450
SQT 15/18-HBMD25	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-16 ER25	42	5000	162	80	80	22.5	125	5006-451
SQT 15/18-HBMD32			2-20 ER32	50	5000	162	80	58	22.5	125	5006-452
SQT 15/18-HBMD32-1			2-20 ER32	50	5000	162	80	82.5	22.5	125	5006-453

H Type Tapping Head

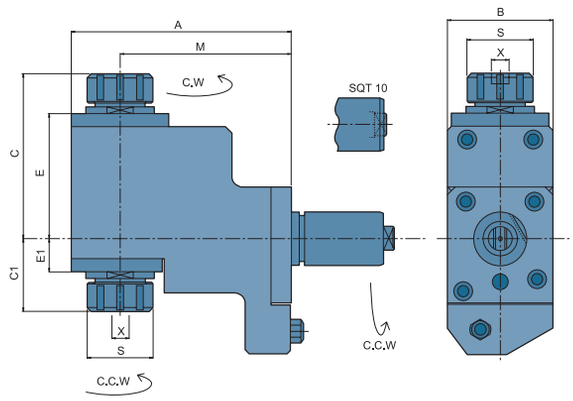
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-HBT16	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-10 ER16	30	3000	119	75	66	24.5	92	5006-454
SQT 15/18-HBT20	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-13 ER20	30	3000	162	80	65	22.5	125	5006-455

H Type Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE **FOR 1ST AND 2ND SPINDLE**

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

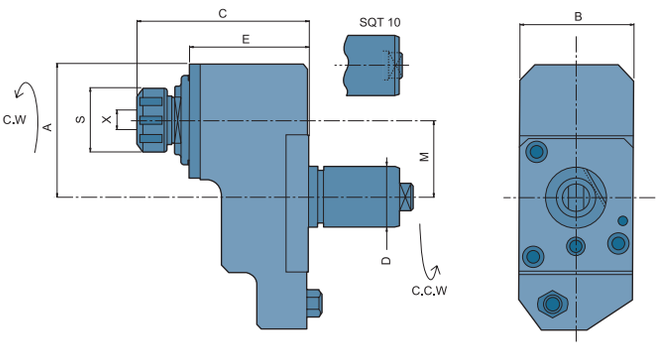
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	C1	E	E1	M	CODE NO.
SQT 10-HMD2025	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1st-ER25 2nd-ER20	42 35	4000	130	75	103	77.5	37	16	100	5006-456
SQT 15/18-HMD232	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	2-20 ER32	42	4000	167	80	119	50	89	19	130	5006-457

V Type Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE **OFFSET**

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

※ 1:2 Speed boost

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-VMD25	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-16 ER25	42	5000	88	75	113	79	50	5006-460
SQT 15/18-VMD25F	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-16 ER25	42	5000	89	80	116	81.5	50	5006-461
SQT 15/18-VMD25F-1			1-16 ER25	42	(1:2) 7000	89	75	116	84	50	※ 5006-462
SQT 15/18-VMD32			2-20 ER32	50	5000	89	80	122	81.5	50	5006-463

V Type Tapping Head

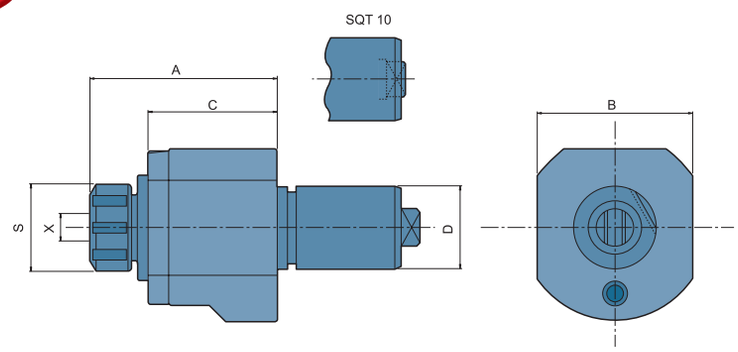
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
SQT 10-VT16F	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-10 ER16	30	4000	88	75	118	79	50	5006-464
SQT 15/18-VT20F	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-13 ER20	30	4000	89	80	120	81.5	50	5006-465

V Type Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE — DA-SERIES

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	CODE NO.
SQT 10-VMD25DA	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-16 ER25	42	6000	91	75	59	5006-466
SQT 15/18-VMD32DA	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	2-20 ER32	50	6000	117	80	80	5006-467

V Type Tapping Head

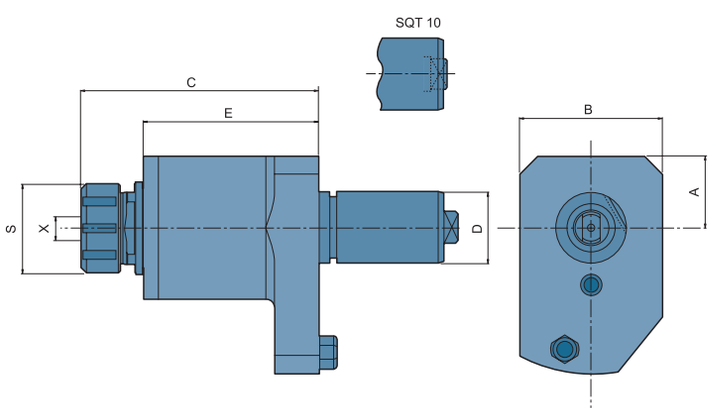
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	CODE NO.
SQT 10-VT16DA	SQT10M-12D 15M-16D SQT200M-16D 250M-16D	40	1-10 ER16	30	4000	97	75	59	5006-468
SQT 15/18-VT20DA	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	1-13 ER20	35	4000	120	80	80	5006-469

V Type Milling & Drilling Head

MAZAK SUPER QUICK TURN TYPE — DA-SERIES, LONG

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

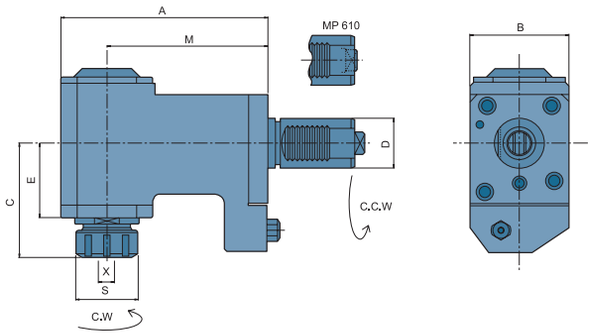
DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	CODE NO.
SQT 15/18-VMD32L	SQT15M-12D 18M-12D SQT200M-12D 250M-12D	40	2-20 ER32	50	6000	40	80	117	82.5	5006-470
						40	80	133.5	98.5	5006-471

H Type Milling & Drilling Head

MAZAK MULTIPLEX TYPE

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

※ 1:2 Speed boost

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
MP 610-HMD25	MP410N-12D 415N-12D MP610-12D 6200-16D	40	1-16 ER25	42	5000	152	75	90	60	115	5006-475
MP 620-HMD25	MP420N-12D 620N-12D MP620-12D 6200-16D	40	1-16 ER25	42	5000	167	80	90	60	130	5006-476
MP 620-HMD32			2-20 ER32	50	5000	167	80	92	60	130	5006-477
MP 620-HMD32-2			2-20 ER32	50	(1:2) 7000	169	80	101	65.5	130	※ 5006-478

H Type Tapping Head

DIMENSIONS

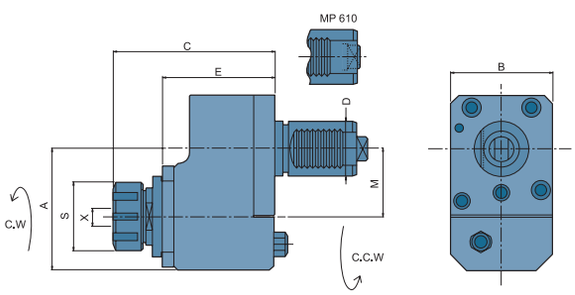
ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
MP 610-HT16	MP410N-12D 415N-12D MP610-12D 6200-16D	40	1-10 ER16	30	3000	152	75	106	60	115	5006-479
MP 620-HT20	MP420N-12D 620N-12D MP620-12D 6200-16D	40	1-13 ER20	30	3000	167	80	108	60	130	5006-480

V Type Milling & Drilling Head

MAZAK MULTIPLEX TYPE

OFFSET

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

DIMENSIONS

ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
MP 610-VMD25F	MP410N-12D 415N-12D MP610-12D 6200-16D	40	1-16 ER25	42	5000	89	75	118	82.5	50	5006-481
MP 620-VMD16F	MP420N-12D 620N-12D MP620-12D 6200-16D	40	1-16 ER25	42	5000	89	80	116	81.5	50	5006-482
MP 620-VMD32F			2-20 ER32	50	5000	89	80	118	81.5	50	5006-483

V Type Tapping Head

DIMENSIONS

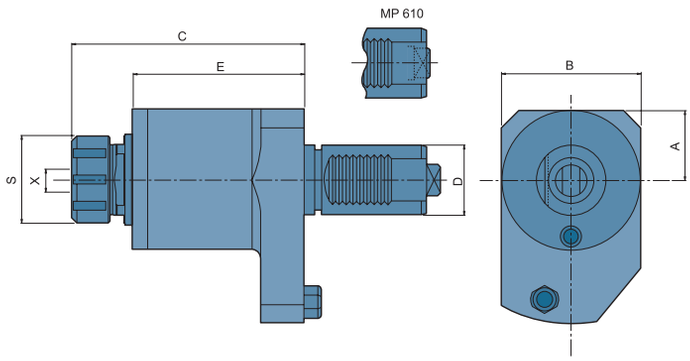
ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	M	CODE NO.
MP 610-VT16F	MP410N-12D 415N-12D MP610-12D 6200-16D	40	1-10 ER16	30	4000	89	75	123	82.5	50	5006-484
MP 620-VT20F	MP420N-12D 620N-12D MP620-12D 6200-16D	40	1-13 ER20	35	4000	89	80	126	81.5	50	5006-485

V Type Milling & Drilling Head

MAZAK MULTIPLEX TYPE

DA-SERIES

NEW



- External coolant supply
- Collet is not included
- To be used for collet DIN 6499

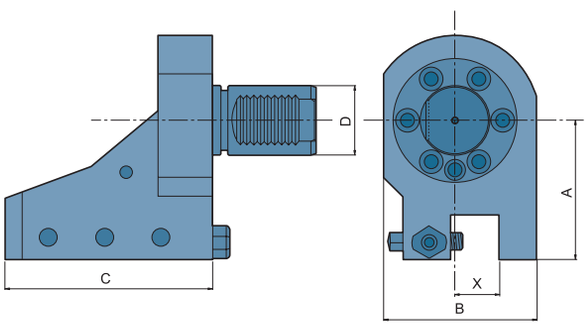
DIMENSIONS

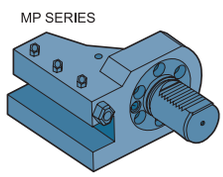
ORDER NO.	Machine Type	D	X Capacity	S	Maximum R.P.M.	A	B	C	E	CODE NO.
MP 610-VMD25DA	MP410N-12D 415N-12D MP610-12D 6200-16D	40	1-16 ER25	42	6000	40	75	105	74	5006-486
MP 620-VMD25DA	MP420N-12D 620N-12D MP620-12D 6200-16D	40	1-16 ER25	42	6000	40	80	105	74	5006-487
MP 620-VMD32DA			2-20 ER32	50	6000	40	80	107	74	5006-488

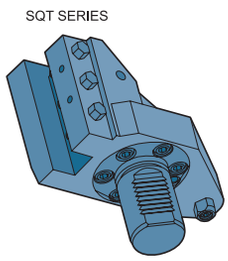
Forward Turning Holder - RH

MAZAK SUPER QUICK TURN & MULTIPLEX TYPE

NEW







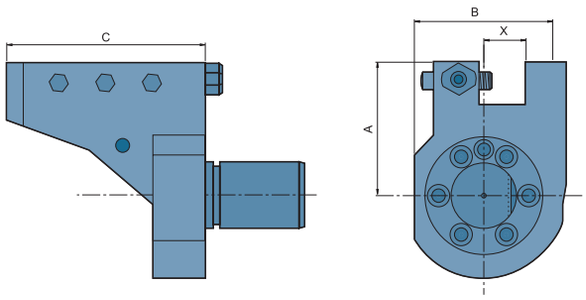
DIMENSIONS

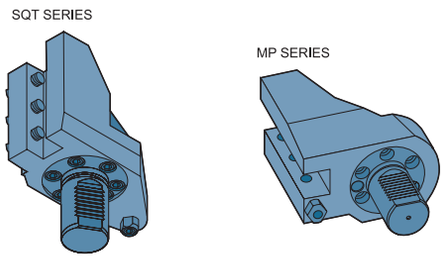
ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
SQT 10M/15AM-FTRH-M	SQT-10M/15AM	40	mm	20	66	76	100	5006-490
SQT 10M/15AM-FTRH-I			inch	0.75″	2.6″	3″	3.937″	5006-491
SQT 15M/18M-FTRH-M	SQT-15M/18M	40	mm	25	78	84	120	5006-492
SQT 15M/18M-FTRH-I			inch	1″	3.071″	3.307″	4.724″	5006-493
MP 610N/615N-FTRH-M	MP-610N/615N	40	mm	20	85	76	100	5006-496
MP 410N/415N-FTRH-I	MP-410N/415N		inch	0.75″	3.347″	3″	3.937″	5006-497
MP 620N/625N-FTRH-M	MP-620N/625N	40	mm	25	83	84	120	5006-498
MP 420N-FTRH-I	MP-420N		inch	1″	3.268″	3.307″	4.724″	5006-499

Reverse Turning Holder - LH

MAZAK SUPER QUICK TURN & MULTIPLEX TYPE

NEW





DIMENSIONS

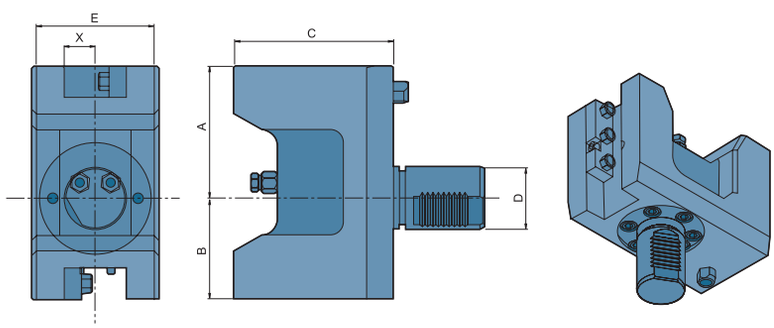
ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
SQT 10M/15AM-RTLH-M	SQT-10M/15AM	40	mm	20	66	76	100	5006-502
SQT 10M/15AM-RTLH-I			inch	0.75″	2.6″	3″	3.937″	5006-503
SQT 15M/18M-RTLH-M	SQT-15M/18M	40	mm	25	78	84	120	5006-504
SQT 15M/18M-RTLH-I			inch	1″	3.071″	3.307″	4.724″	5006-505
SQT 28M/30M-RTLH-M	SQT-28M/30M	50	mm	25	-			5006-506
SQT 28M/30M-RTLH-I			inch	1″	-			5006-507
MP 610N/615N-RTLH-M	MP-610N/615N	40	mm	20	85	76	100	5006-508
MP 410N/415N-RTLH-I	MP-410N/415N		inch	0.75″	3.347″	3″	3.937″	5006-509
MP 620N/625N-RTLH-M	MP-620N/625N	40	mm	25	83	84	120	5006-510
MP 420N-RTLH-I	MP-420N		inch	1″	3.268″	3.307″	4.724″	5006-511

※ ON REQUEST

Double Turning Holder

MAZAK SUPER QUICK TURN TYPE

NEW



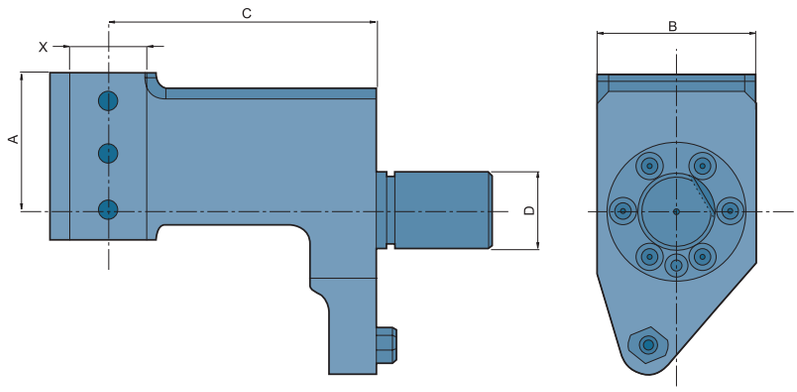
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	E	CODE NO.
SQT 10M/15AM-DT-M	SQT-10M/15AM	40	mm	20	85	65	103	76	5006-514
SQT 10M/15AM-DT-I			inch	0.75″	3.347″	2.559″	4.055″	2.992″	5006-515
SQT 15M/18M-DT-M	SQT-15M/18M	40	mm	25	88	78	136	84	5006-516
SQT 15M/18M-DT-I			inch	1″	3.465″	3.071″	5.354″	3.307″	5006-517

Boring Bar Holder

MAZAK SUPER QUICK TURN TYPE

NEW



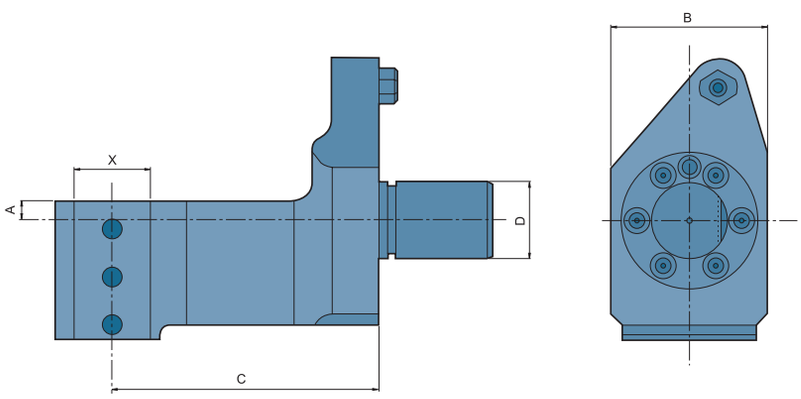
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
SQT 10M/15AM-B-M	SQT-10M/15AM	40	mm	32	56	76	110	5006-520
SQT 10M/15AM-B-I			inch	1.25″	2.205″	2.992″	4.331″	5006-521
SQT 15M/18M-B-M	SQT-15M/18M	40	mm	40	71	82	140	5006-522
SQT 15M/18M-B-I			inch	1.5″	2.795″	3.228″	5.512″	5006-523
SQT 28M/30M-B-M	SQT-28M/30M	50	mm	50	65	90	175	5006-524
SQT 28M/30AM-B-I			inch	2″	2.559″	3.543″	6.890″	5006-525

Boring Bar Holder

MAZAK MULTIPLEX TYPE

NEW



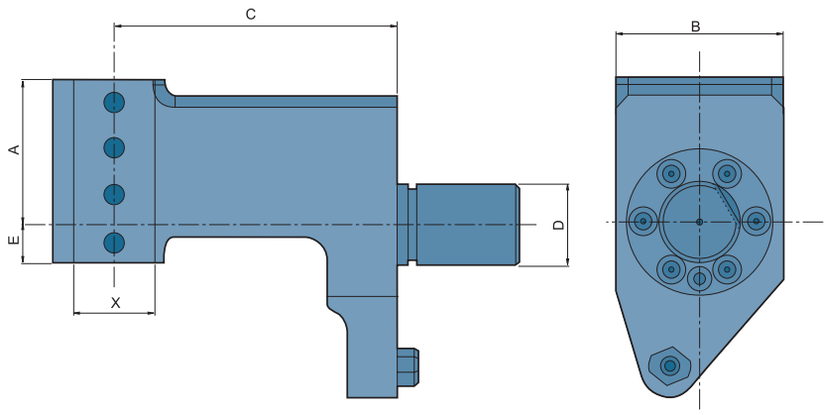
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
MP-610N-B-A	MP-610N	40	mm	25	5	76	120	5006-526
MP-610N-B-B			inch	1″	0.197″	2.997″	4.724″	5006-527
MP-610N-B-C			mm	32	10	76	120	5006-528
MP-610N-B-D			inch	1.25″	0.394″	2.997″	4.724″	5006-529
MP-615N-B-A	MP-615N	40	mm	25	10	76	130	5006-530
MP-615N-B-B			inch	1″	0.394″	2.997″	5.118″	5006-531
MP-615N-B-C			mm	32	10	76	130	5006-532
MP-615N-B-D			inch	1.25″	0.394″	2.997″	5.118″	5006-533
MP-620N-B-A	MP-620N	40	mm	25	5	82	140	5006-534
MP-620N-B-B			inch	1″	0.197″	3.228″	5.512″	5006-535
MP-620N-B-C			mm	40	10	82	140	5006-536
MP-620N-B-D			inch	1.5″	0.394″	3.228″	5.512″	5006-537

Double Boring Bar Holder

MAZAK SUPER QUICK TURN TYPE

NEW



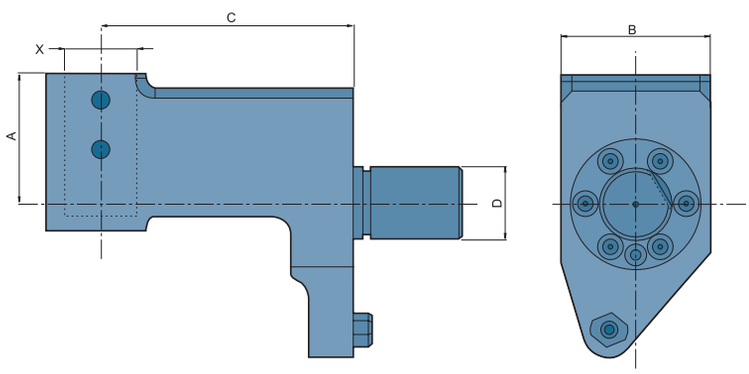
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	E	CODE NO.
SQT 10M/15AM-DB-M	SQT-10M/15AM	40	mm	20	60	76	110	10	5006-540
SQT 10M/15AM-DB-I			inch	0.75″	2.362″	3″	4.331″	0.394″	5006-541
SQT 15M/18M-DB-M	SQT-15M/18M	40	mm	25	85	84	140	15	5006-542
SQT 15M/18M-DB-I			inch	1″	3.346″	3.307″	5.512″	0.591″	5006-543
SQT 28M/30M-DB-M	SQT-28M/30M	50	mm	32	75	90	180	35	5006-544
SQT 28M/30M-DB-I			inch	1.25″	2.953″	3.543″	7.087″	1.378″	5006-545

U Drill Holder

MAZAK SUPER QUICK TURN TYPE

NEW



- External, internal coolant supply

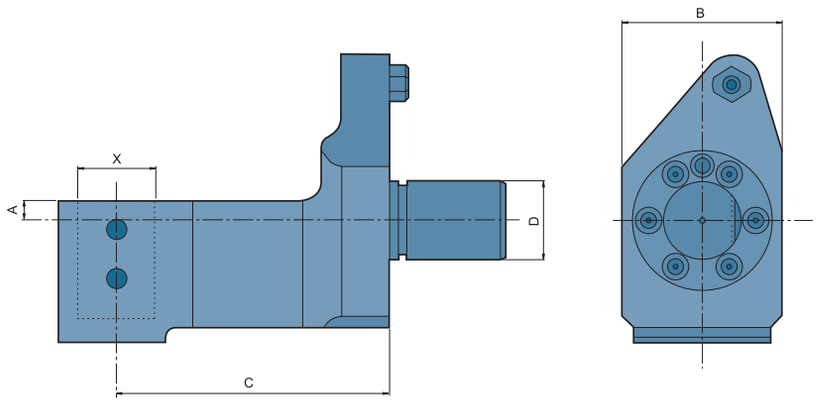
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
SQT 10M/15AM-UD-M	SQT-10M/15AM	40	mm	32	48	76	110	5006-550
SQT 10M/15AM-UD-I			inch	-	1.890″	2.992″	4.331″	5006-551
SQT 15M/18M-UD-M	SQT-15M/18M	40	mm	40	63	82	140	5006-552
SQT 15M/18M-UD-I			inch	-	2.480″	3.228″	5.512″	5006-553

U Drill Holder

MAZAK MULTIPLEX TYPE

NEW



- External, internal coolant supply

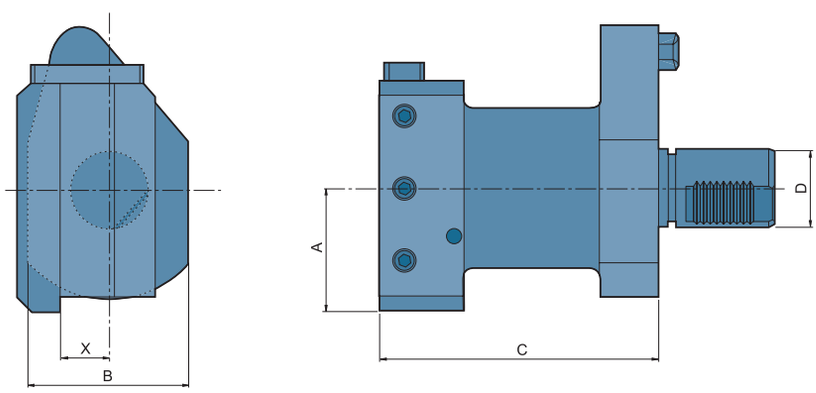
DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
MP-610-UD-M	MP-610	40	mm	25	10	76	120	5006-560
MP-610-UD-I			inch	-	0.394″	2.992″	4.724″	5006-561
MP-620-UD-M	MP-620	40	mm	40	10	82	140	5006-562
MP-620-UD-I			inch	-	0.394″	3.228″	5.512″	5006-563

Facing Holder - RH

MAZAK SUPER QUICK TURN & MULTIPLEX TYPE

NEW

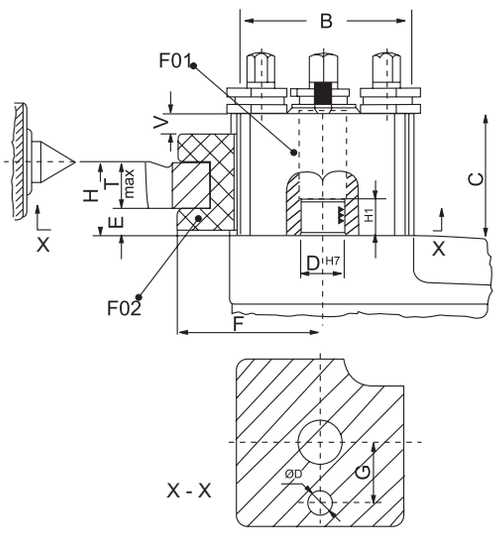


DIMENSIONS

ORDER NO.	Machine Type	D		X	A	B	C	CODE NO.
SQT 10M/15AM-FRH-M	SQT-10M/15AM	40	mm	20	65	76	110	5006-570
SQT 10M/15AM-FRH-I			inch	0.75″	2.559″	2.992″	4.331″	5006-571
SQT 15M/18M-FRH-M	SQT-15M/18M	40	mm	25	60	82	143	5006-572
SQT 15M/18M-FRH-I			inch	1″	2.362″	3.228″	5.630″	5006-573
SQT 28M/30M-FRH-M	SQT-28M/30M	50	mm	25	57	90	163	5006-574
SQT 28M/30M-FRH-I			inch	1″	2.244″	3.543″	6.417″	5006-575
MP 610N/615N-FRH-M	MP-610N/615N	40	mm	20	65	76	110	5006-576
MP 410N/415N-FRH-I	MP-410N/415N		inch	0.75″	2.559″	2.992″	4.331″	5006-577
MP 620N/625N-FRH-M	MP-620N/625N	40	mm	25	55	82	143	5006-578
MP 420N-FRH-I	MP-420N		inch	1″	2.165″	3.228″	5.630″	5006-579

Quick Change Tool Post & Holders-Italian Style

NEW



Italian Style

The main block is assembled with cast-hardened steel, secured rigidly by the latch carriage machine steel bolt. The main block has 4 slide openings for inserting the proper tool-holder; these can be securely fastened by a simple and safe eccentric device, which also adjusts the height for each tool holder. The tool shank is securely held by 4 hardened screws. The simplicity and fast tool changing increase the production of lathe turning. No chatter or vibrations. This style is interchangeable with Rapidue and STM.

Complete set includes:

- 1 pieces Tool post
- 3 pieces of turning holders
- 1 piece of Round shanks
- Standard spanners

MAIN BODY DIMENSIONS

ORDER NO.	Lathe swing	B	D^{H7}	H		C	E	T_{max}	F	Ømax	Morse NO.	ØD	G	H1	▭
				Min	Max										
VTP-M	180-250	57.7	18	24	34	45	8	16	56	14	1	7	27	18	70
VTP-AR-AP	250-300	64.5	18	25	41	56	9	16	63	16	1	8	30	16	80
VTP-A	250-350	82.0	24	32	42	60	12	20	75	18	2	10	35	20	100
VTP-BR-BP	300-380	91.6	28	38	53	75	13	25	90	20	3	10	40	20	115
VTP-B	350-500	100.0	30	47	65	85	15	32	100	24	3	12	48.2	25	127
VTP-C	500-650	115.3	38	51	72	94	19	32	108	26	4	14	58.2	26	145

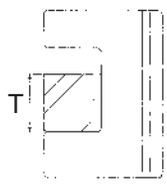
SET TYPE

ORDER NO.	5-PIECE SETS EACH SET INCLUDES	G.W. kgs	CODE NO.
VTP-M	1 x F01-M, 3 x F02-M AND 1 x F03-M	3.1	5006-890
VTP-AR-AP	1 x F01-AR-AP, 3 x F02-AR-AP AND 1 x F03-AR-AP	4.5	5006-891
VTP-A	1 x F01-A, 3 x F02-A AND 1 x F03-A	9.3	5006-892
VTP-BR-BP	1 x F01-BR-BP, 3 x F02-BR-BP AND 1 x F03-BR-BP	13.2	5006-893
VTP-B	1 x F01-B, 3 x F02-B AND 1 x F03-B	17.5	5006-894
VTP-C	1 x F01-C, 3 x F02-C AND 1 x F03-C	23.0	5006-895

Individually Piece Italian Style

Tool Post

ORDER NO.	Centre Height (mm)	Lathe Swing (mm)	CODE NO.
VTP-F01-M	120	240	5006-900
VTP-F01-AR-AP	140	280	5006-901
VTP-F01-A	170	340	5006-902
VTP-F01-BR-BP	200	400	5006-903
VTP-F01-B	230	460	5006-904
VTP-F01-C	280	560	5006-905



● Turning Holders

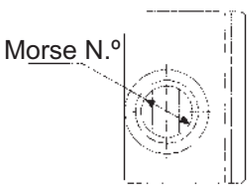
Turning Holder

ORDER NO.	Centre Height (mm)	Max. Square & Rectangular Tool (mm)	CODE NO.
VTP-F02-M	120	16	5006-906
VTP-F02-AR-AP	140	16	5006-907
VTP-F02-A	170	20	5006-908
VTP-F02-BR-BP	200	25	5006-909
VTP-F02-B	230	32	5006-910
VTP-F02-C	280	32	5006-911

● Round Shanks

Round Shanks

ORDER NO.	Centre Height (mm)	Max. Holding Dia (mm)	CODE NO.
VTP-F03-M	120	14	5006-912
VTP-F03-AR-AP	140	16	5006-913
VTP-F03-A	170	18	5006-914
VTP-F03-BR-BP	200	20	5006-915
VTP-F03-B	230	24	5006-916
VTP-F03-C	280	26	5006-917



● Morse Holder

Morse Holder

ORDER NO.	Centre Height (mm)	Morse Taper Hole	CODE NO.
VTP-F04-M	120	MT No. 1	5006-918
VTP-F04-AR-AP	140	MT No. 2	5006-919
VTP-F04-A	170	MT No. 2	5006-920
VTP-F04-BR-BP	200	MT No. 3	5006-921
VTP-F04-B	230	MT No. 3	5006-922
VTP-F04-C	280	MT No. 4	5006-923

Quick Change Tool Post & Holders-40 Positioning European Style

European Style

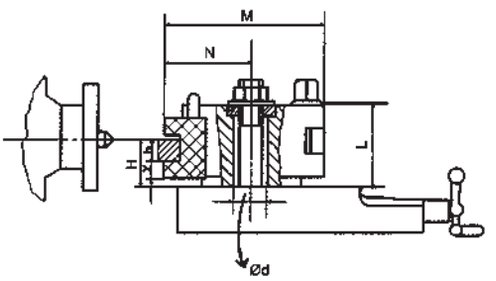
Tool post and tool holders are precisely grounded with 40 tool-bit positions. Easy to operate and can be fitted with many different tool-holders. Locking and loosening of any tool-holders are performed by a simple eccentric clamping. The simplicity and fast tool changing increases the lathe turning production. A height adjustment for tool bits is controlled by a knurled head-screw, without the need for packing plates or shims. This style is interchangeable with Hasse.

Complete set includes:

- 1 Pieces Tool post
- 3 pieces Turning & Facing Holder-"D"
- 1 piece Boring Bar Holder-"B"

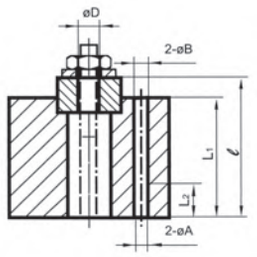
ORDER NO.	5-PIECE SETS EACH SET INCLUDES (5 pcs/set)	G.W. kgs	CODE NO.
VTP-V-A0	1 x tool post F40-0(A0), 2 x F40-010(A0D12x50) and 1 x F40-020(A0B12x50) and 1 x F40-040(A0A2.7x10x50)	1.5	5006-955A
VTP-V-A1	1 x tool post F40-1(A1), 2 x F40-111(A1D16x75) and 1 x F40-140(A1A2.7x10x75) and 1 x F40-121(A1B16x80)	4.0	5006-956A
VTP-V-E5	1 x tool post F40-2(B5), 2 x F40-211(E5D20x100) and 1 x F40-220(E5B30x100) and 1 x F40-240(E5A2.7x10x100)	8.0	5006-957A
VTP-B2	1 x tool post F40-3(B2), 3 x F40-311(B2D25x120) and 1 x F40-320(B2B32x130)	12.3	5006-958
VTP-C3	1 x tool post F40-4(C3), 3 x F40-411(C3D32x150) and 1 x F40-422(C3B40x160)	24.3	5006-959

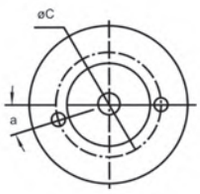
Set Style For Lathe



ORDER NO. / PARAMETER	VTP-F40-0	VTP-F40-1	VTP-F40-2	VTP-F40-3	VTP-F40-4
	D12	D16 D20	D20 D25	D25 D32	D32 D40 D45
Driving Power (kw)	1.2	2	4.5	7	13
Lathe Swing (mm)	120-220	150-300	200-400	300-500	400-700
H min (mm)	18.5	25.5 29.5	32 37	38 46	47.5 55.5 61
H max (mm)	26.5	36.5 40.5	49 52	58 57	87.5 91.5 91
y (mm)	6.5	9.5	12	13 14	15.5 15.5 16
h (mm)	12	16 20	20 25	25 32	32 40 45
M (mm)	6.8	104	132	150	192 201 202
L (mm)	37	55	68	76	107
N (mm)	34	52	66	73	93 102 103
ød (mm)	13	20	20	32	40

40 Position Tool Post Body





ORDER NO.	ØD	L2	L1	ℓ	ØA	ØB	ØC	α
VTP-F40-0	6	-	30	37	-	-	-	-
VTP-F40-1	10	12	45	55.3	5.6	6.8	42	18°
VTP-F40-2	10	14	57	67.3	5.6	6.8	49	15°
VTP-F40-3	14	20	65	75	6.9	9	64	30°
VTP-F40-4	24.5	10	95	107	9.5	11	88	18°

40 Position Tool Post

ORDER NO.	Lathe swing (mm)	For Style NO.	Height of cutting edge range (mm)	CODE NO.
VTP-F40-0	120-220	VTP-A0	D12/18.5~26.5	5006-930
VTP-F40-1	150-300	VTP-A1	D16/25.5~36.5 or D20/29.5~40.5	5006-931
VTP-F40-2	200-400	VTP-E5	D20/32~49 or D25/37~52	5006-932
VTP-F40-3	300-500	VTP-B2	D25/38~58 or D32/46~57	5006-933
VTP-F40-4	400-700	VTP-C3	D32/47.5~87.5 or D40/55.5~91.5 or D45/61~91	5006-934

Quick Change Tool Post & Holders-40 Positioning European Style

INDIVIDVALLY PIECE EUROPEAN STYLE

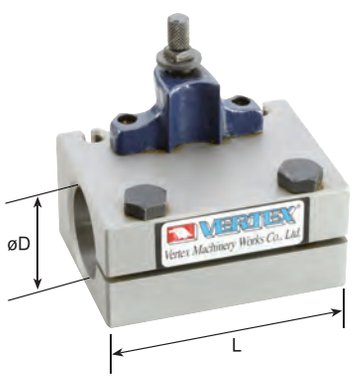
NEW

Turning & Facing Holder-"D"

ORDER NO.	Series NO.	Max. Height (mm)	Max. Length (mm)	CODE NO.
VTP-F40-010	A0D	12	50	5006-935
VTP-F40-111	A1D	16	75	5006-936
VTP-F40-112	A1D	16	80	5006-937
VTP-F40-113	A1D	16	90	5006-938
VTP-F40-114	A1D	20	75	5006-939
VTP-F40-110	A1D	20	80	5006-940
VTP-F40-115	A1D	20	90	5006-941
VTP-F40-211	E5D	20	100	5006-942
VTP-F40-212	E5D	25	100	5006-943
VTP-F40-311	B2D	25	120	5006-944
VTP-F40-312	B2D	25	140	5006-945
VTP-F40-313	B2D	32	120	5006-946
VTP-F40-314	B2D	32	140	5006-947
VTP-F40-411	C3D	32	150	5006-948
VTP-F40-412	C3D	32	170	5006-949
VTP-F40-413	C3D	40	150	5006-950
VTP-F40-414	C3D	40	170	5006-951
VTP-F40-415	C3D	45	170	5006-952

Boring Bar Holder-"B"

ORDER NO.	Series NO.	Max. Dia (mm)	Length (mm)	CODE NO.
VTP-F40-020	A0B	12	50	5006-960
VTP-F40-121	A1B	16	80	5006-961
VTP-F40-120	A1B	18	80	5006-962
VTP-F40-122	A1B	20	90	5006-963
VTP-F40-220	E5B	30	100	5006-964
VTP-F40-320	B2B	32	130	5006-965
VTP-F40-421	C3B	32	160	5006-966
VTP-F40-422	C3B	40	160	5006-967

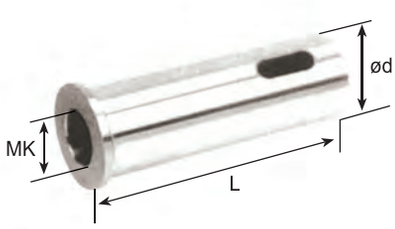


Drilling & Boring Bar Holder-"S"

ORDER NO.	Series NO.	Max. Dia (mm)	Length (mm)	CODE NO.
VTP-F40-030	A0S	15	50	5006-968
VTP-F40-130	A1S	30	80	5006-969
VTP-F40-131	A1S	20	90	5006-970
VTP-F40-231	E5S	30	100	5006-971
VTP-F40-232	E5S	40	100	5006-972
VTP-F40-330	B2S	40	120	5006-973
VTP-F40-431	C3S	40	150	5006-974
VTP-F40-432	C3S	50	150	5006-975

Cut-Off Tool Holder-"A"

ORDER NO.	Series NO.	Blade- TxW	Length (mm)	CODE NO.
VTP-F40-040	A0A	2.7 x 10	50	5006-976
VTP-F40-140	A1A	2.7 x 10	75	5006-977
VTP-F40-240	E5A	2.7 x 10	100	5006-978
VTP-F40-340	B2A	4 x 16	120	5006-979
VTP-F40-440	C3A	5 x 18.5	150	5006-980



Morse Taper Bushing-"L"

ORDER NO.	Series NO.	Diameter (mm)	Length (mm)	Morse Taper (mm)	CODE NO.
VTP-F40-151	A1L	30	80	NO.1	5006-981
VTP-F40-152	A1L	30	90	NO.2	5006-982
VTP-F40-251	E5L	30	96	NO.2	5006-983
VTP-F40-252	E5L	40	114	NO.3	5006-984
VTP-F40-350	E5L	40	120	NO.2	5006-985
VTP-F40-351	E5L	40	120	NO.3	5006-986
VTP-F40-451	C3L	40	140	NO.3	5006-987
VTP-F40-452	C3L	40	150	NO.4	5006-988
VTP-F40-453	C3L	50	150	NO.4	5006-989

Speed

ACCURACY

/

SPEED

/

RESPONSIBILITY

/

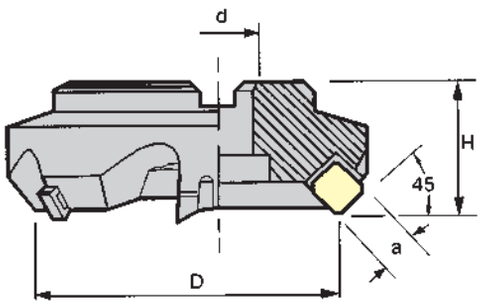
COOPERATIVE

F1~F2	FACE MILL CUTTER
F3~F7	END MILLS / MILLING CUTTER
F7	CUTTING HOLDER / CUTTING BLOCKS
F8~F11	TOOL HOLDER FOR LATHE
F12~F13	BORING BAR
F14	TECHNICAL DATA
F15	INSERT FOR FACE MILL CUTTER
F16~E17	SOLID CARBIDE END MILLS
F18	SOLID CARBIDE BALL NOSE END MILLS
F19	SOLID CARBIDE END MILLS
F20	SOLID CARBIDE NC / CNC SPOT DRILLS
F21~F22	FINISHING END MILLS BALL NOSE END MILLS
F23~F24	MACHINE REAMERS IN STEPS OF 0.5MM MACHINE REAMERS CARBIDE TIPPED
F25~F26	UNIVERSAL END MILLS
F27	FINISHING END MILLS
F28	BALL NOSE END MILLS
F29	END MILLS FOR ALUMINIUM FINISHING END MILLS
F30	BALL NOSE END MILLS ROUGHING END MILLS
F31~F32	TWIST DRILLS
F33~F35	HIGH PERFORMANCE DRILLS
F36	COMBINED DRILL AND COUNTERSINK MACHINE REAMERS LONG LENGTH
F37~F38	ENE MILLS WIT CORNER RUDIUS
F39	HAND REAMERS-HSS ADJUSTABLE REAMERS
F40	OUDSIDE RADIUS SHAPR END MILLS COUNTERBORE END MILLS
F41	T-SLOT MILLING CUTTERS METAL SLITTING SAWS

CUTTING TOOL

Face Milling Cutter 45º

45º

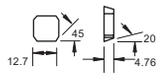
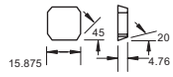


ORDER NO.	D	dØ INCH	dØ METRIC	H	BLADE	WEIGHT(kg) INCH	WEIGHT(kg) METRIC	CODE NO.
SE545-3	80	25.4	27	50	5	2.1	1.8	6001-001
SE545-4	100	31.75	32	55	5	3.5	2.9	6001-002
SE545-5	125	38.1	40	60	6	5.1	4.8	6001-003
SE545-6	160	50.8	40	60	8	7.1	6.8	6001-004
SE545-8	200	47.625	60	60	10	10.4	9.7	6001-005
SE545-10	250	47.625	60	60	12	16.8		6001-006
SE545-12	300	47.625	60	60	14	27		6001-007
SE445-3	80	25.4	27	50	5	2.1	1.8	6001-020
SE445-4	100	31.75	32	55	5	3.2	3	6001-021
SE445-5	125	38.1	40	60	6	4.7	4.9	6001-022
SE445-6	160	50.8	40	60	8	7.3	7	6001-023
SE445-8	200	47.625	60	60	10	9.6	8.4	6001-024
SE445-10	250	47.625	60	60	12	16.7	17	6001-025
SE445-12	300	47.625	60	60	14	25.8	25.8	6001-026

PARTS

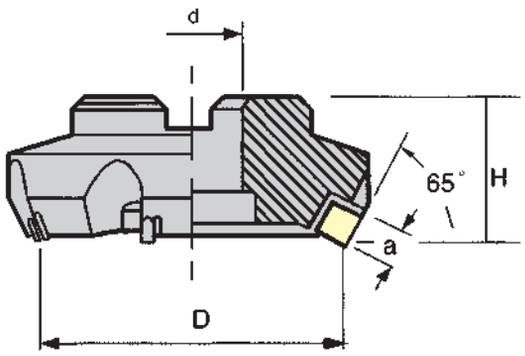
SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

INSERT

445 LIGHT DUTY	545 HEAVY DUTY
	
SEKN-1203	SEKN-1504

Face Milling Cutter 65º

65º

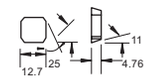
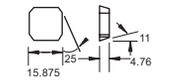


ORDER NO.	D	dØ INCH	dØ METRIC	H	BLADE	WEIGHT(kg) INCH	WEIGHT(kg) METRIC	CODE NO.
SP535-3	80	25.4	27	50	5	2.1	1.6	6001-040
SP535-4	100	31.75	32	55	5	3.3	2.7	6001-041
SP535-5	125	38.1	40	60	6	5.6	4.6	6001-042
SP535-6	160	50.8	40	60	8	7.4	6.9	6001-043
SP535-8	200	47.625	60	60	10	10.2	10.1	6001-044
SP535-10	250	47.625	60	60	12	17.5		6001-045
SP535-12	300	47.625	60	60	14			6001-046
SP435-3	80	25.4	27	50	5	2.1	2.7	6001-070
SP435-4	100	31.75	32	55	5	3.3	4.5	6001-071
SP435-5	125	38.1	40	60	6	5.5	6.8	6001-072
SP435-6	160	50.8	40	60	8	7.8	7.2	6001-073
SP435-8	200	47.625	60	60	10	10.1		6001-074
SP435-10	250	47.625	60	60	12	17.5		6001-075
SP435-12	300	47.625	60	60	14	26.8		6001-076

PARTS

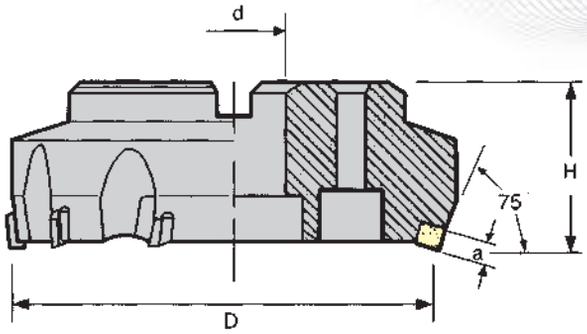
SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

INSERT

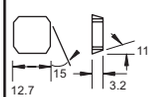
435 LIGHT DUTY	535 HEAVY DUTY
	
SPKN-1204	SPKN-1504

Face Milling Cutter 75º

75º

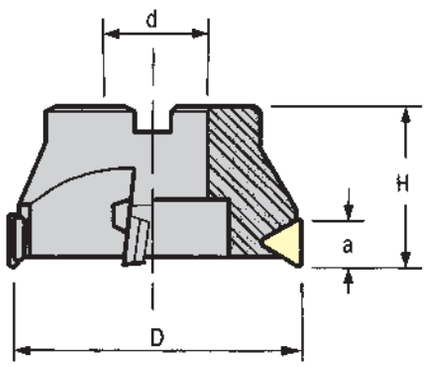


ORDER NO.	D	dØ		H	BLADE	WEIGHT(kg)		CODE NO.
		INCH	METRIC			INCH	METRIC	
FP-3	80	25.4	27	50	5	2	1.5	6001-090
FP-4	100	31.75	32	55	6	3.1	2.5	6001-091
FP-5	125	38.1	40	60	8	5.3	4.4	6001-092
FP-6	160	50.8	40	60	10	6.5	6.4	6001-093
FP-8	200	47.625	60	60	12	9.6	8.6	6001-094
FP-10	250	47.625	60	60	16	17.1		6001-095
FP-12	300	47.625	60	60	20	29.3		6001-096

INSERT	PARTS				
SPUN-120308 SPKM-1203EDR					
	SCR-CL5/16	CL-S	SCR-ST-S4	ST-S	WRN-M4T

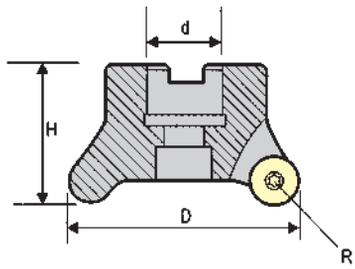
Face Milling Cutter 90º

90º



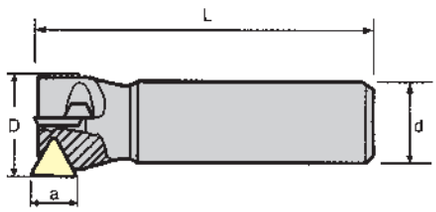
ORDER NO.	D	dØ		H	a	BLADE	WEIGHT(kg)	INSERT					CODE NO.
		INCH	METRIC										
TP-63	63	25.4	27	50	22	3	0.7	TPMN 2204 TPKN 2204PPR	ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-110
TP-80	80	25.4	27	50	22	4	1.1		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-111
TP-100	100	31.75	32	55	22	5	1.9		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-112
TP-125	125	38.1	40	60	22	6	3		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-113
TP-160	160	50.8	40	60	22	7	4.9		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-114
TP-200	200	47.625	60	60	22	8	8.1		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-115
TP-250	250	47.625	60	60	22	9	15.9		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-116
TP-300	300	47.625	60	60	22	10	28		ST-T	SCR-W5/16	WRN-M5T	SCR-ST-T4	6001-117

Round Insert Milling Cutter



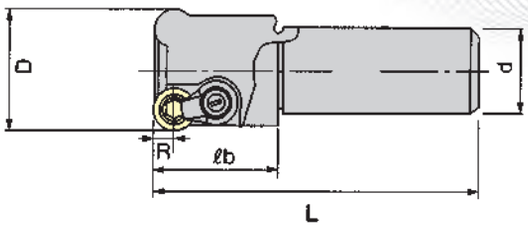
ORDER NO.	D	d inch	d metrics	H	BLADE	R	HITACHI INSERT	SCREW FOR INSERT	SCREW FOR CLAMP	CLAMP		CODE NO.
RM-5R50	50	-	22	45	4	5	RDMT10T3	SCR-CRS4	SCR-DM3.5	CL-5R	T15	6001-130
RM-5R63	63	25.4	22	50	5	5	RDMT10T3	SCR-CRS4		CL-5R	T15	6001-131
RM-8R50	50	-	22	45	3	8	RDMT1604	SCR-CRS5	SCR-W 1/4S		T20	6001-133
RM-8R63	63	25.4	22	50	3/4	8	RDMT1604	SCR-CRS5			T20	6001-134

Shoulder End Mills



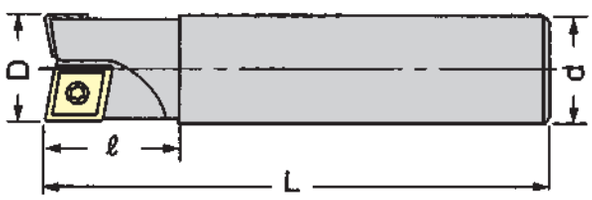
ORDER NO.	D	d	L	BLADE	INSERT			WEIGHT (kg)	CODE NO.
SAE-20	20	20	110	2	TPMN110308	SCR-W3/16	WRN-M3L	0.4	6001-150
SAE-25	25	20	110	2	TPMN110308	SCR-W3/16	WRN-M3L	0.3	6001-151
SAE-30	30	20	130	2	TPMN160308	SCR-W1/4	WRN-M4L	0.5	6001-152
SAE-35	35	20	130	2	TPMN160308	SCR-W1/4	WRN-M4L	0.4	6001-153
SAE-40	40	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.5	6001-154
SAE-45	45	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.6	6001-155
SAE-50	50	20	130	3	TPMN160308	SCR-W1/4	WRN-M4L	0.7	6001-156
SAE-63	63	32	150	4	TPMN160308	SCR-W5/16	WRN-M4L	1.5	6001-157

Round Insert End Mills



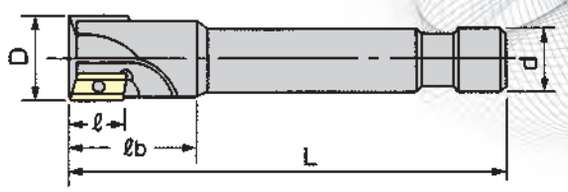
ORDER NO.	BLADE	D	L	d	ℓb	R	HITACHI INSERT	CLAMP	SCREW FOR CLAMP	SCREW FOR INSERT		CODE NO.
C20-4R20-150	2	20	150	20	50	4	RDMT0802	-	SCR-DM3.5	SCR-CRS3	T8	6002-001
C25-5R25-150	2	25	150	25	60	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-002
C25-5R25-200	2	25	200	25	120	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-003
C25-5R30-150	2	30	150	25	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-004
C25-5R30-200	2	30	200	25	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-005
C32-5R32-150	3	32	150	32	70	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-006
C32-5R32-200	3	32	200	32	120	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-007
C32-5R32X150	3	35	150	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-008
C32-5R35X200	3	35	200	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-009
C32-5R40X150	3	40	150	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-010
C32-5R40X200	3	40	200	32	50	5	RDMT10T3	CL-5R		SCR-CRS4	T15	6002-011

Drilling & Milling Cutter



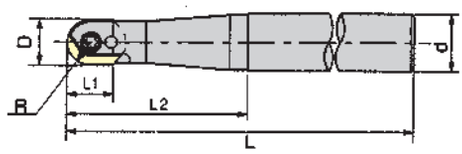
ORDER NO.	BLADE	D	L	d	l						CODE NO.
C16-DM16-120	2	16	120	16	30	CCMT060204	CPMT080204Z	SCR-CJU2.5	-	T8	6002-030
C16-DM16-175	2	16	175	16	40	CCMT060204	CPMT080204Z	SCR-CJU2.5	-	T8	6002-031
C20-DM20-130	2	20	130	20	30	CCMT060204	CPMT090204Z	SCR-CJU2.5	SCR-CJU3.5	T8.T15	6002-032
C20-DM20-185	2	20	185	20	50	CCMT060204	CPMT090204Z	SCR-CJU2.5	SCR-CJU3.5	T8.T15	6002-033
C25-DM25-130	2	25	130	25	40	CCMT090308	CPMT120308Z	SCR-CJU4	-	T15	6002-034
C25-DM25-220	2	25	220	25	70	CCMT090308	CPMT120308Z	SCR-CJU4	-	T15	6002-035
C32-DM32-170	2	32	170	32	50	CCMT120408	CPMT160408Z	SCR-CJU5	-	T20	6002-036
C32-DM32-250	2	32	250	32	80	CCMT120408	CPMT160408Z	SCR-CJU5	-	T20	6002-037

High Speed Shoulder Mills



ORDER NO.	BLADE	D	L	d	l	lb	HITACHI MITSUBISHI			CODE NO.
C16-SS16-120H	1	16	120	16	12	30	APET120204	SCR-CEX3.5	T15	6002-060
C20-SS20-120H	2	20	120	20	12	30	APET120204	SCR-CEX3.5	T15	6002-062
C20-SS20-200H	2	20	200	20	15	30	ADET120204	SCR-CEX4	T15	6002-063
C25-SS25-130H	2	25	130	25	15	35	ADET160304	SCR-CEX4	T15	6002-064
C25-SS25-200H	2	25	200	25	15	35	ADET160304	SCR-CEX4	T15	6002-065
C32-SS32-150H	3	32	150	32	15	45	ADET160304	SCR-CEX4	T15	6002-066
C32-SS32-200H	3	32	200	32	15	45	ADET160304	SCR-CEX4	T15	6002-067
C25-SS25-150M	2	25	150	25	14	35	APMT1604PDER	SCR-CAP4	T15	6002-069
C25-SS30-150M	2	30	150	25	14	45	APMT1604PDER	SCR-CAP4	T15	6002-070
C32-SS32-150M	3	32	150	32	14	45	APMT1604PDER	SCR-CAP4	T15	6002-080
C32-SS32-250M	3	32	250	32	-	60	APMT1604PDER	SCR-CAP4	T15	6002-081
C32-SS35-150M	3	35	150	32	14	45	APMT1604PDER	SCR-CAP4	T15	6002-082
C32-SS40-150M	4	40	150	32	14	45	APMT1604PDER	SCR-CAP4	T15	6002-083

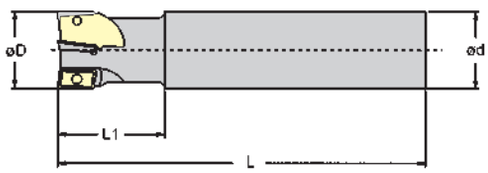
Ball End Mills



ORDER NO.	R	D	d	L	L_1	L_2	INSERT	SCREW	SCREW	WRENCH	WEIGHT (kg)	CODE NO.
C20-AR8-160	8	16	20	160	13	65	ZPFW160	SCR-AR8	SCR-CBP3.5	T15	0.5	6002-130
C25-AR10-180	10	20	25	180	17	80	ZPFW200	SCR-AR10	SCR-CBP5	T20		6002-131
C32-AR12.5-200	12.5	25	32	200	22	90	ZPFW250	SCR-AR12.5	SCR-CBP5	T20		6002-132
C32-AR15-220	15	30	32	220	27	100	ZPFW300	SCR-AR15	SCR-CBP6	T25	1.3	6002-133

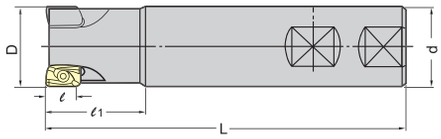
High-Speed Rough End Mills

Mitsubishi inserts recommended



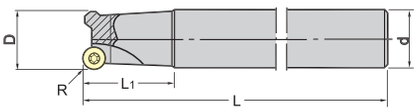
ORDER NO.	D	d	L	L1	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VAPX-1616	16	16	120	24	2	AOMT 123608	SCR-APX2.5	T8	6002-030
VAPX-1716	17	16	150	24	2				6002-031
VAPX-2020	20	20	150	29	3				6002-032
VAPX-2120	21	20	150	29	3				6002-033
VAPX-2525	25	25	150	34	4				6002-034
VAPX-2625	26	25	200	34	4				6002-035

CAP400R High Speed Shoulder Mills



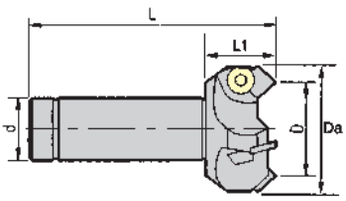
ORDER NO.	D	d	ℓb	l	L	BLADE				WEIGHT (kg)	CODE NO.
CAP400R-2525X150	25	25	35	14	150	2	APMT1604PDER	SCR-CAP4	T15	0.7	6003-040
CAP400R-2525X200	25	25	35	14	200	2	APMT1604PDER	SCR-CAP4	T15	0.9	6003-041
CAP400R-3025X150	30	25	45	14	150	2	APMT1604PDER	SCR-CAP4	T15	0.6	6003-042
CAP400R-3025X200	30	25	45	14	200	2	APMT1604PDER	SCR-CAP4	T15	0.9	6003-043
CAP400R-3232X150	32	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	0.9	6003-044
CAP400R-3232X200	32	32	60	14	200	3	APMT1604PDER	SCR-CAP4	T15	1.3	6003-045
CAP400R-3532X150	35	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	0.9	6003-046
CAP400R-3532X200	35	32	45	14	200	3	APMT1604PDER	SCR-CAP4	T15	1.3	6003-047
CAP400R-4032X150	40	32	45	14	150	3	APMT1604PDER	SCR-CAP4	T15	1.1	6003-048
CAP400R-5032X150	50	32	45	14	150	4	APMT1604PDER	SCR-CAP4	T15	1.5	6003-049

CRT Round Insert End Mills



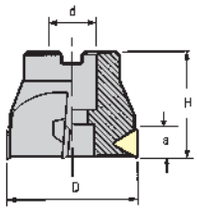
ORDER NO.	D	d	R	L	BLADE	INSERT			WEIGHT (kg)	CODE NO.
CRT-6R32X150	32	32	6	150	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	0.9	6003-051
CRT-6R32X200	32	32	6	200	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.3	6003-052
CRT-6R35X150	35	32	6	150	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.1	6003-053
CRT-6R32X200	35	32	6	200	3	RPMT1204MO	SCR-W3/16S	SCR-CRT4	1.3	6003-054

Face End Mills



ORDER NO.	D	Da	d	L	L_1	BLADE	INSERT			WEIGHT (kg)	CODE NO.
C-32-SE445-50	50	62	32	150	45	3	SEKN1203	SCR-W1/4L	WRN-M4T	1.25	6003-060
C-32-SE445-63	63	74	32	150	45	4	SEKN1203	SCR-W1/4L	WRN-M4T	1.3	6003-061

Shoulder Face Milling Cutter



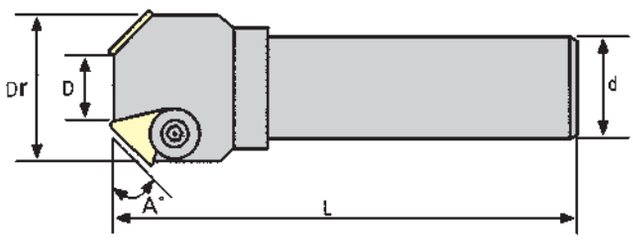
ORDER NO.	D	d METRIC	H	a	BLADE	INSERT			CODE NO.
TPS-50	50	22	50	16	3	TPMN1603	SCR-W1/4	WRN-M4L	6003-065
TPS-63	63	22	50	16	4	TPMN1603	SCR-W1/4	WRN-M4L	6003-066

45º Chamfering End Mills

ORDER NO.	Cutter Dia.	Shank Dia.	Length	Capacity	Screw	Wrench	INSERT	WEIGHT (kg)	CODE NO.
TC12	25ø	12ø	110	3ø~25ø	M4	T15	TCMT16T304	0.2	6004-002
TC40	40ø	12ø	100	20ø~36ø	M4	T15	TCMT16T304		6004-003

45º Chamfering End Mills

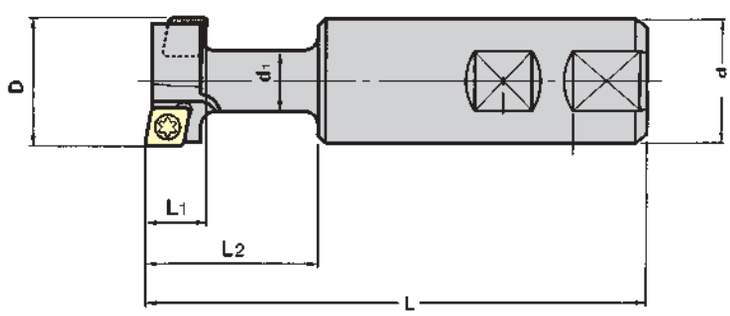
ISO CODE



ORDER NO.	A°	D	Dr	d	L	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VCE-4521	45	5	21	16	120	1	TPUN1603	SCR-W1/4	WRN-M4L	6004-005
VCE-4531	45	10	31	20	120	2				6004-006
VCE-4550	45	20	50	25	130	3	TPUN2204	SCR-W5/16	WRN-M5L	6004-007
VCE-4532	45	6	32	32	150	1				6004-008
VCE-4563	45	35	63	25	150	3				6004-009

T-Slot End Mills

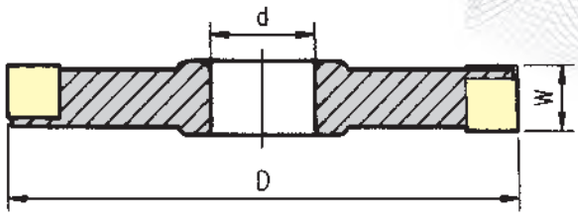
ISO CODE



ORDER NO.	D	L1	d	d1	L2	L	TEETH	INSERT	SCREW	WRENCH	CODE NO.
VTE-2411	24	11	20	12	29	90	4	CCMT-060204	SCR-TS2.5	T8	6004-015
VTE-3114	31	14	25	15	42	110	4	CPMT-080204Z			6004-016
VTE-3918	39	18	32	19	49	120	4	CPMT-090308	SCR-TS4	T15	6004-017
VTE-4922	49	22	32	25	60	140	4	CPMT-120408	SCR-TS5	T20	6004-018

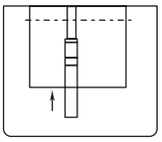
Side Milling Cutter

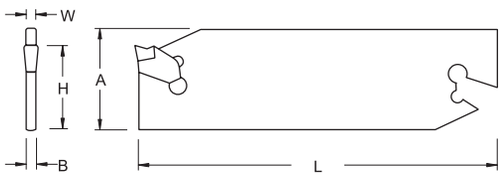
ISO CODE



ORDER NO.	D	d	W	TEETH	INSERT	CLAMP	SCREW	WRENCH	CODE NO.
VSM-1016	100	1″	16	10	SPUN 120304	CL-S CL-SL	SCR-CL5/16	WRN-M4T	6004-020
VSM-1216	125	1″	16	14					6004-021
VSM-1516	150	1″	16	16					6004-022
VSM-2016	200	1″	16	20					6004-023

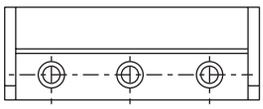
Cutting Holder

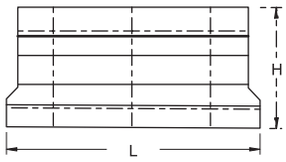


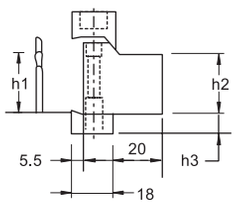


ORDER NO.	MAX. DIA	W	B	H	L	A	INSERT	Wrench	WEIGHT(kg)	CODE NO.
CGIH26-3	75	3	2.4	21	100	25.4	NGTN3	SL-1	0.1	6004-030
CGIH32-3	100	3	2.4	25	150	31.3			0.2	6004-031

Cutting Blocks



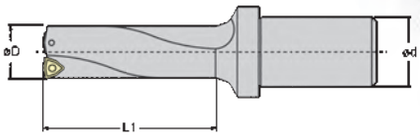




ORDER NO.	h_1	h_2	h_3	H	L	Clamp	Screw	Wrench	Cutting Holders	WEIGHT(kg)	CODE NO.
SBU20-26	20	20	10	45	80	BCS15	BX0622	LH050	CGIH26-3	0.8	6004-060
SBU20-32	20	20	13.5	50	100	BCS20			CGIH32-3	1.1	6004-061
SBU25-32	25	25	8.5	50	110	BCS25				1.2	6004-062

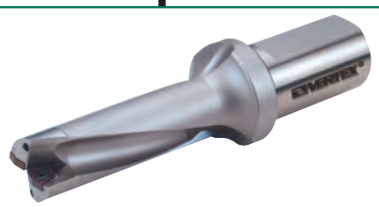
Power Super Drill 2L

ISO CODE

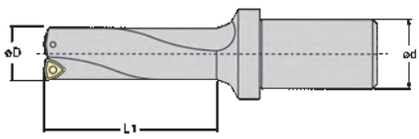


ORDER NO.	D	d	L1	INSERT	SCREW	WRENCH	CODE NO.
VSD-15X2	15	25	30	WCMX030208	SCR-EXD2.5	T8	6004-100
VSD-16X2	16	25	32				6004-101
VSD-17X2	17	25	34				6004-102
VSD-18X2	18	25	36				6004-103
VSD-19X2	19	25	38				6004-104
VSD-20X2	20	25	40				6004-105
VSD-21X2	21	32	42	WCMX040208	SCR-EXD2.5	T8	6004-106
VSD-22X2	22	32	44				6004-107
VSD-23X2	23	32	46				6004-108
VSD-24X2	24	32	48				6004-109
VSD-25X2	25	32	50	WCMX050308	SCR-EXD3	T10	6004-110
VSD-26X2	26	32	52				6004-111
VSD-27X2	27	32	54				6004-112
VSD-28X2	28	32	56				6004-113
VSD-29X2	29	32	58				6004-114
VSD-30X2	30	32	60				6004-115
VSD-31X2	31	32	62	WCMX06T308	SCR-EXD3.5	T15	6004-116
VSD-32X2	32	32	64				6004-117
VSD-33X2	33	32	66				6004-118
VSD-34X2	34	32	68				6004-119
VSD-35X2	35	32	70				6004-120

Power Super Drill 3L

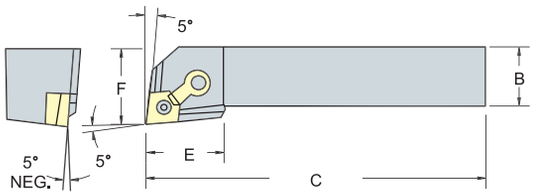


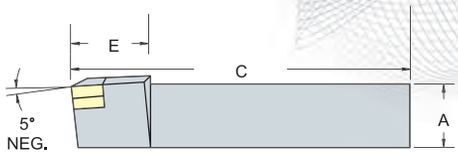
ISO CODE



ORDER NO.	D	d	L1	INSERT	SCREW	WRENCH	CODE NO.
VSD-14X3	14	25	42	WCMX030208	SCR-EXD2.5	T8	6004-131
VSD-15X3	15	25	45				6004-132
VSD-16X3	16	25	48				6004-133
VSD-17X3	17	25	51				6004-134
VSD-18X3	18	25	54				6004-135
VSD-19X3	19	25	57				6004-136
VSD-20X3	20	25	60				6004-137
VSD-21X3	21	32	63	WCMX040208	SCR-EXD2.5	T8	6004-138
VSD-22X3	22	32	66				6004-139
VSD-23X3	23	32	69				6004-140
VSD-24X3	24	32	72				6004-141
VSD-25X3	25	32	75	WCMX050308	SCR-EXD3	T10	6004-142
VSD-26X3	26	32	78				6004-143
VSD-27X3	27	32	81				6004-144
VSD-28X3	28	32	84				6004-145
VSD-29X3	29	32	87				6004-146
VSD-30X3	30	32	90				6004-147
VSD-31X3	31	32	93	WCMX06T308	SCR-EXD3.5	T15	6004-148
VSD-32X3	32	32	96				6004-149
VSD-33X3	33	32	99				6004-150
VSD-34X3	34	32	102				6004-151
VSD-35X3	35	32	105				6004-152
VSD-36X3	36	32	108				6004-153
VSD-37X3	37	32	111				6004-154

MCLN
95º

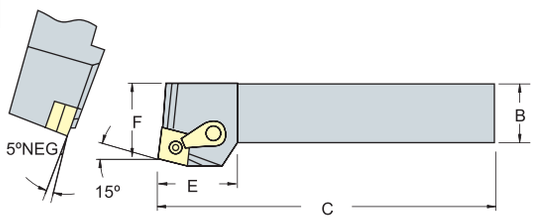


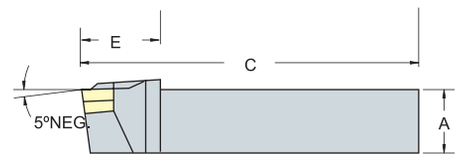


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MCLNR-1616H12	MCLNL-1616H12	CNMG 12 04 08	16	16	100	32	20	SNC-432	LCS-617	CP50-22	CS70-22	0.25	0.25	6005-001	6005-101
MCLNR-2020K12	MCLNL-2020K12	CNMG 12 04 08	20	20	125	32	25	SNC-432	LCS-617	CP50-22	CS70-22	0.45	0.45	6005-002	6005-102
MCLNR-2525M12	MCLNL-2525M12	CNMG 12 04 08	25	25	150	32	32	SNC-432	LCS-617	CP50-22	CS70-22	0.80	0.80	6005-003	6005-103
MCLNR-3225P12	MCLNL-3225P12	CNMG 12 04 08	32	25	170	32	32	SNC-432	LCS-617	CP50-22	CS70-22	1.20	1.20	6005-004	6005-104

MCRN
75º

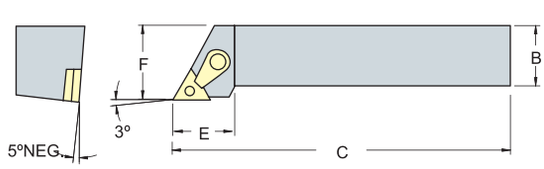


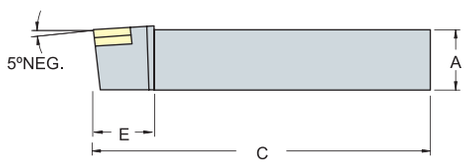


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MCRNR-2020K12	MCRNL-2020K12	CNMG 12 04 08	20	20	125	32	25	SMC-432	LCS-617	CP50-22	CS70-22	0.45	0.45	6005-030	6005-130
MCRNR-2525M12	MCRNL-2525M12	CNMG 12 04 08	25	25	150	32	32	SMC-432	LCS-617	CP50-22	CS70-22	0.80	0.80	6005-031	6005-131
MCRNR-3225P12	-	CNMG 12 04 08	32	25	170	32	32	SMC-432	LCS-617	CP50-22	CS70-22	1.20	-	6005-032	-

MTJN
93º

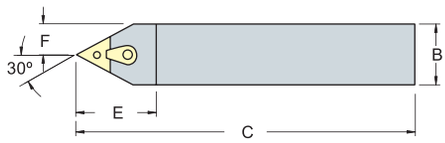


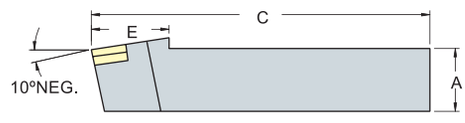


RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MTJNR-2020K16	MTJNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-513	CP50-22	CS70-22	0.45	0.45	6005-060	6005-160
MTJNR-2525M16	MTJNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-513	CP50-22	CS70-22	0.80	0.80	6005-061	6005-161

MTEN
60º

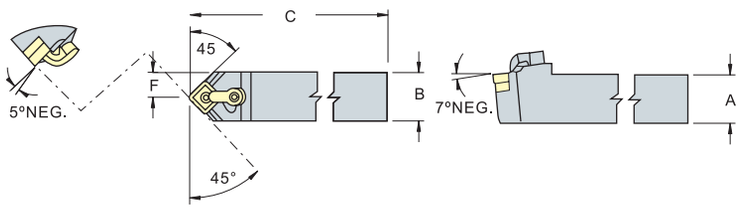




NEUTRAL HAND

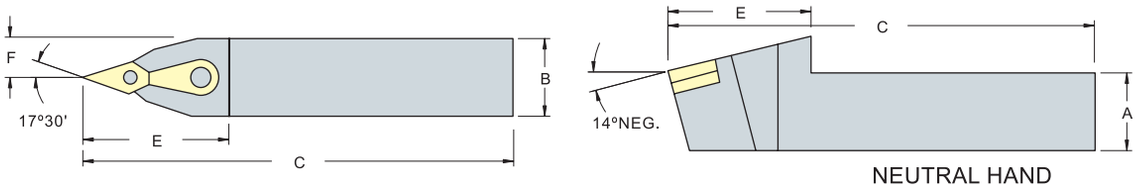
ORDER NO.	INSERT	DIMENSIONS					PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	E	F						Right
MTENN-2020K16	TNMG 16 04 08	20	20	125	32	10.46	SMT-322	LCS-513	CP50-22	CS70-22	0.45	6005-090
MTENN-2525M16	TNMG 16 04 08	25	25	150	32	12.95	SMT-322	LCS-513	CP50-22	CS70-22	0.80	6005-091

MSD
45º



ORDER NO.	INSERT	DIMENSIONS				PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	F						Right
MSDNN-2020K12	SN□□1204□□	20	20	125	10.3	SMS-432	LCS-617	CP50-22	CS70-22	0.45	6005-120
MSDNN-2525M12	SN□□1204□□	25	25	150	12.8	SMS-432	LCS-617	CP50-22	CS70-22	0.80	6005-121
MSDNN-3225P12	SN□□1204□□	32	25	170	12.8	SMS-432	LCS-617	CP50-22	CS70-22	1.20	6005-122

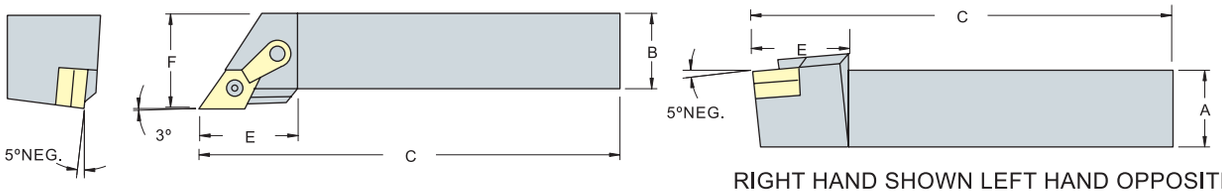
MVVN
72º32’



NEUTRAL HAND

ORDER NO.	INSERT	DIMENSIONS					PARTS				WEIGHT (kg)	CODE NO.
Righthand		A	B	C	E	F						Right
MVVNN-2020K 16K	VNMG 16 04 08	20	20	125	42	10.57	SMV-322	LCS-513	CP50-25	CS70-22	0.45	6005-150
MVVNN-2525M 16K	VNMG 16 04 08	25	25	150	42	13.06	SMV-322	LCS-513	CP50-25	CS70-22	0.80	6005-151
MVVNN-3225P 16K	VNMG 16 04 08	32	25	170	42	13.06	SMV-322	LCS-513	CP50-25	CS70-22	1.20	6005-152

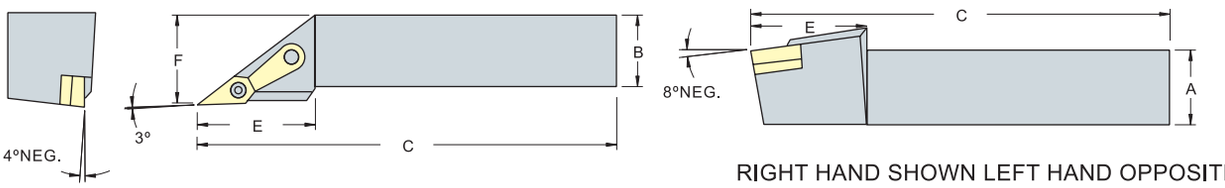
MDJN
93º



RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MDJNR-2020K15	MDJNL-2020K15	DNMG 15 04 08	20	20	125	36	25	SMD-463	LCS-619	CP50-24	CS70-22	0.45	0.45	6005-180	6005-280
MDJNR-2525M15	MDJNL-2525M15	DNMG 15 04 08	25	25	150	36	32	SMD-463	LCS-619	CP50-24	CS70-22	0.80	0.80	6005-181	6005-281
MDJNR-3225P15	MDJNL-3225P15	DNMG 15 04 08	32	25	170	36	32	SMD-463	LCS-619	CP50-24	CS70-22	1.20	1.20	6005-182	6005-282

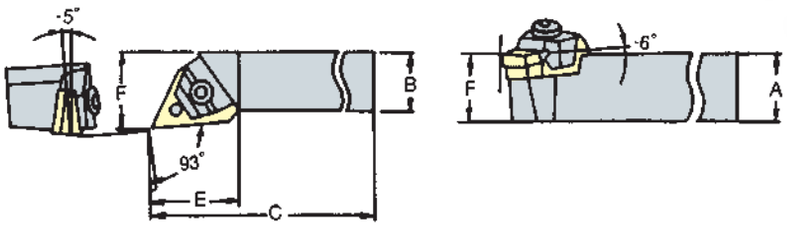
MVJN
93º



RIGHT HAND SHOWN LEFT HAND OPPOSITE

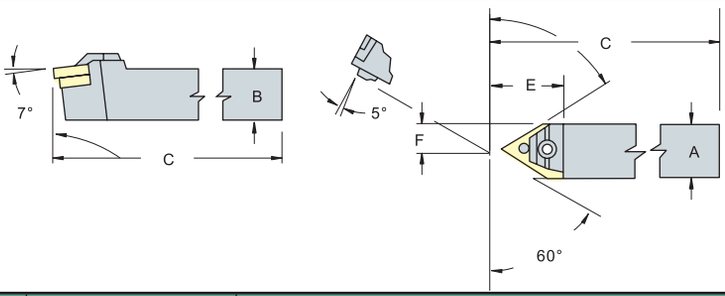
ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F					Right	Left	Right	Left
MVJNR-2020K16	MVJNL-2020K16	VNMG 16 04 08	20	20	125	37	25	SMV-322	LCS-513	CP50-25	CS70-22	0.45	0.45	6005-210	6005-310
MVJNR-2525M16	MVJNL-2525M16	VNMG 16 04 08	25	25	150	37	32	SMV-322	LCS-513	CP50-25	CS70-22	0.80	0.80	6005-211	6005-311
MVJNR-3225P16	MVJNL-3225P16	VNMG 16 04 08	32	25	170	37	32	SMV-322	LCS-513	CP50-25	CS70-22	1.20	1.20	6005-212	6005-312

WTJN
93º



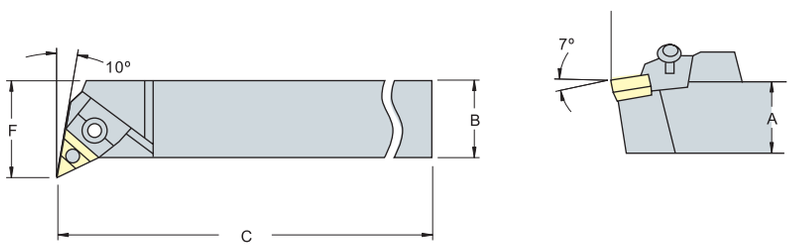
ORDER NO.		INSERT	DIMENSIONS					PARTS						WEIGHT(kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F							Right	Left	Right	Left
WTJNR-2020K16	WTJNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	0.45	6005-240	6005-340
WTJNR-2525M16	WTJNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	0.80	6005-241	6005-341

WTEN
60º



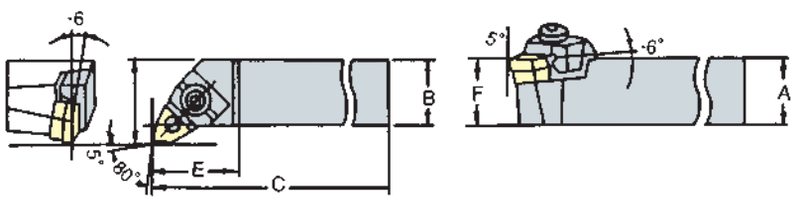
ORDER NO.	INSERT	DIMENSIONS					PARTS						WEIGHT (kg)	CODE NO.
Righthand		A	B	C	E	F								Right
WTENN-2020K16	TNMG 16 04 08	20	20	125	32	10	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	6005-270
WTENN-2525M16	TNMG 16 04 08	25	25	150	38	12.5	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	6005-271

WTXN



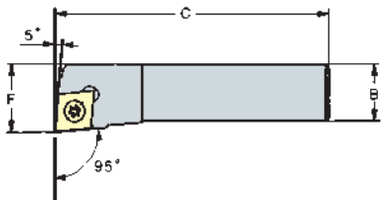
ORDER NO.		INSERT	DIMENSIONS					PARTS						WEIGHT(kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F							Right	Left	Right	Left
WTXNR-2020K16	WTXNL-2020K16	TNMG 16 04 08	20	20	125	32	25	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.45	0.45	6005-300	6005-400
WTXNR-2525M16	WTXNL-2525M16	TNMG 16 04 08	25	25	150	32	32	SMT-322	LCS-420N	LCS-4B	MMW-30	CS70-24	LW030	0.80	0.80	6005-301	6005-401

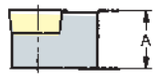
WWLN
95º



ORDER NO.		INSERT	DIMENSIONS					PARTS						WEIGHT(kg)		CODE NO.	
Righthand	Lefthand		A	B	C	E	F							Right	Left	Right	Left
WWLNR-2020K08	WWLNL-2020K08	WNMG 08 04 08	20	20	125	32	25	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	0.45	0.45	6005-330	6005-430
WWLNR-2525M08	WWLNL-2525M08	WNMG 08 04 08	25	25	150	32	32	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	0.80	0.80	6005-331	6005-431
WWLNR-3225P08	WWLNL-3225P08	WNMG 08 04 08	32	25	170	32	32	SMW-433	LCS-520	LCS-5B	MMW-40	CS70-25	LW040 & LW030	1.20	1.20	6005-332	6005-432

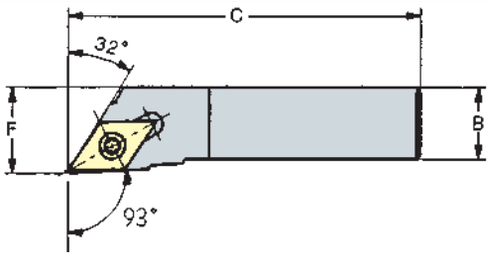
SCLC

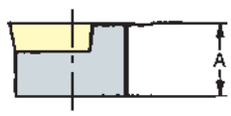




ORDER NO.		INSERT	DIMENSIONS				PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	F			Right	Left	Right	Left
SCLCR-0808H06	SCLCL-0808H06	CC□□0602□□	8	8	100	10	CS2560	FT-7	0.06	0.06	6005-360	6005-460
SCLCR-1010H06	SCLCL-1010H06	CC□□0602□□	10	10	100	12	CS2560	FT-7	0.08	0.08	6005-361	6005-461
SCLCR-1212H09	SCLCL-1212H09	CC□□09T3□□	12	12	100	16	CS3590	FT-15	0.12	0.12	6005-362	6005-462
SCLCR-1616H09	SCLCL-1616H09	CC□□09T3□□	16	16	100	20	CS3590	FT-15	0.21	0.21	6005-363	6005-463

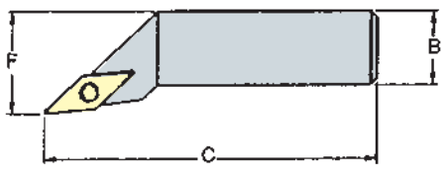
SDJC





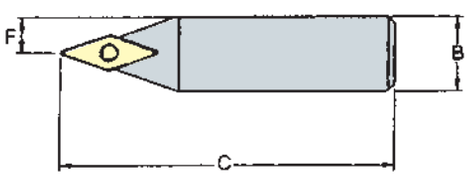
ORDER NO.		INSERT	DIMENSIONS				PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	F			Right	Left	Right	Left
SDJCR-0808H07	SDJCL-0808H07	DC□□0702□□	8	8	100	10	CS2560	FT-7	0.06	0.06	6005-390	6005-490
SDJCR-1010H07	SDJCL-1010H07	DC□□0702□□	10	10	100	12	CS2560	FT-7	0.08	0.08	6005-391	6005-491
SDJCR-1212H11	SDJCL-1212H11	DC□□11T3□□	12	12	100	16	CS4090	FT-15	0.12	0.12	6005-392	6005-492
SDJCR-1616H11	SDJCL-1616H11	DC□□11T3□□	16	16	100	20	CS4090	FT-15	0.21	0.21	6005-393	6005-493

SVJC



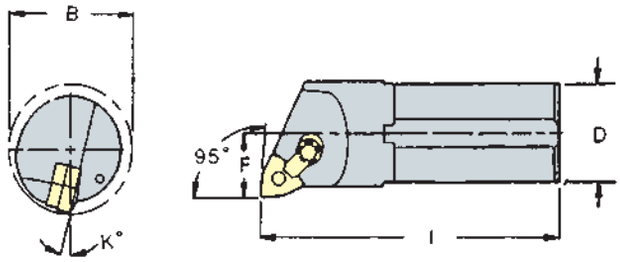
ORDER NO.		INSERT	DIMENSIONS				PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		A	B	C	F					Right	Left	Right	Left
SVJCR-1010H11	SVJCL-1010H11	VC□□1103□□	10	10	100	10.5	-	-	CS2560	FT-7	0.08	0.08	6005-420	6005-520
SVJCR-1212H11	SVJCL-1212H11	VC□□1103□□	12	12	100	12.5	-	-	CS2560	FT-7	0.12	0.12	6005-421	6005-521
SVJCR-1616H11	SVJCL-1616H11	VC□□1103□□	16	16	100	16.5	-	-	CS2560	FT-7	0.21	0.21	6005-422	6005-522
SVJCR-2020K16	SVJCL-2020K16	VC□□1604□□	20	20	125	25	SMV-321	SN535	CS3511	FT-15	0.40	0.40	6005-423	6005-523
SVJCR-2525M16	SVJCL-2525M16	VC□□1604□□	25	25	150	32	SMV-321	SN535	CS3511	FT-15	0.72	0.72	6005-424	6005-524

SVVC



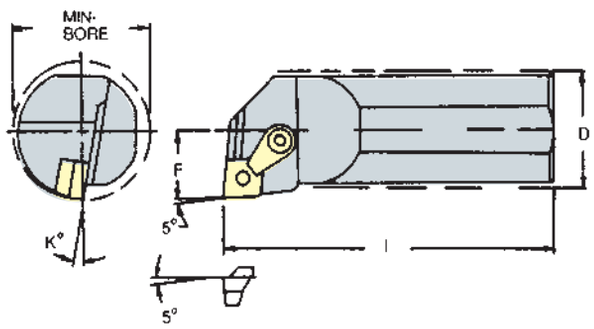
ORDER NO.	INSERT	DIMENSIONS				PARTS				WEIGHT (kg)		CODE NO.
		A	B	C	F					Right	Left	
SVVCN-1010H11	VC□□1103□□	10	10	100	5	-	-	CS2560	FT-7	0.08	0.08	6005-450
SVVCN-1212H11	VC□□1103□□	12	12	100	6	-	-	CS2560	FT-7	0.12	0.12	6005-451
SVVCN-1616H11	VC□□1103□□	16	16	100	8	-	-	CS2560	FT-7	0.21	0.21	6005-452
SVVCN-2020K16	VC□□1604□□	20	20	125	10	SMV-321	SN535	CS35115	FT-15	0.40	0.40	6005-453
SVVCN-2525M16	VC□□1604□□	25	25	150	12.5	SMV-321	SN535	CS35115	FT-15	0.72	0.72	6005-454

MWLN
95º



ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		D	F	I	B	Kº					Right	Left	Right	Left
S20R-MWLNR08	S20R-MWLNL08	WNMG 08 04 □□	20	13	200	25	17º	-	LCS-511	CP50-26	CS70-21	0.50	0.50	6005-480	6005-580
S25R-MWLNR08	S25R-MWLNL08	WNMG 08 04 □□	25	17	200	32	14º	-	LCS-511	CP50-26	CS70-21	0.95	0.95	6005-481	6005-581
S32S-MWLNR08	S32S-MWLNL08	WNMG 08 04 □□	32	22	250	40	14º	SMW-432	LCS-617	CP50-22	CS70-22	1.60	1.60	6005-482	6005-582
S40T-MWLNR08	S40T-MWLNL08	WNMG 08 04 □□	40	27	300	50	12º	SMW-432	LCS-617	CP50-22	CS70-22	2.90	2.90	6005-483	6005-583
S50U-MWLNR08	S50U-MWLNL08	WNMG 08 04 □□	50	35	350	63	12º	SMW-432	LCS-617	CP50-22	CS70-22	5.90	5.90	6005-484	6005-584

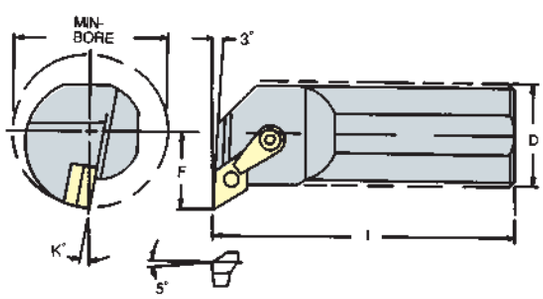
MCLN
95º



RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		D	F	I	B	Kº					Right	Left	Right	Left
S20R-MCLNR12	S20R-MCLNL12	CNMG 12 04 08	20	13	200	25	17º	-	LCS-511	CP50-26	CS70-21	0.50	0.50	6005-510	6005-610
S25R-MCLNR12	S25R-MCLNL12	CNMG 12 04 08	25	17	200	32	14º	-	LCS-511	CP50-26	CS70-21	0.95	0.95	6005-511	6005-611
S32S-MCLNR12	S32S-MCLNL12	CNMG 12 04 08	32	22	250	40	14º	SMC-432	LCS-617	CP50-22	CS70-22	1.60	1.60	6005-512	6005-612
S40T-MCLNR12	S40T-MCLNL12	CNMG 12 04 08	40	27	300	50	12º	SMC-432	LCS-617	CP50-22	CS70-22	2.90	2.90	6005-513	6005-613
S50U-MCLNR12	S50U-MCLNL12	CNMG 12 04 08	50	35	350	63	12º	SMC-432	LCS-617	CP50-22	CS70-22	5.90	5.90	6005-514	6005-614

MDUN
93º

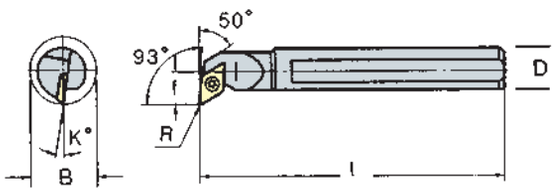


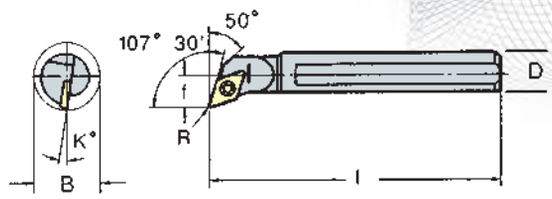
RIGHT HAND SHOWN LEFT HAND OPPOSITE

ORDER NO.		INSERT	DIMENSIONS					PARTS				WEIGHT (kg)		CODE NO.	
Righthand	Lefthand		D	F	I	B	Kº					Right	Left	Right	Left
S25R-MDUNR15	S25R-MDUNL15	DNMG 15 04 08	25	17	200	32	12º	SMD-443	LCS-617	CS50-24	CS70-22	0.95	0.95	6005-540	6005-640
S32S-MDUNR15	S32S-MDUNL15	DNMG 15 04 08	32	22	250	40	10º	SMD-443	LCS-617	CS50-24	CS70-22	1.60	1.60	6005-541	6005-641
S40T-MDUNR15	S40T-MDUNL15	DNMG 15 04 08	40	27	300	50	10º	SMD-443	LCS-617	CS50-24	CS70-22	2.90	2.90	6005-542	6005-642
S50U-MDUNR15	S50U-MDUNL15	DNMG 15 04 08	50	35	350	63	10º	SMD-443	LCS-617	CS50-24	CS70-22	5.90	5.90	6005-543	6005-643

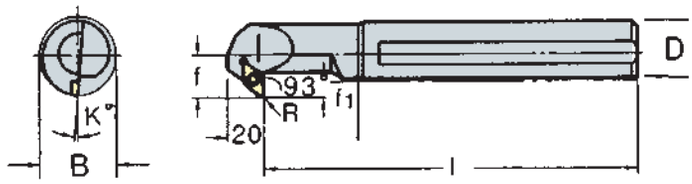
Boring Bars

SMALL SIZE

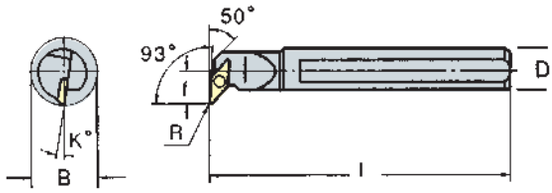


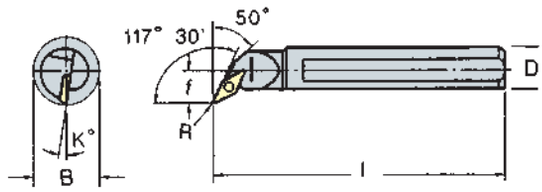


ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand	D	F	l	B	Kº				Right	Left	Right	Left
S10M-SDUCR07	S10M-SDUCL07	10	7	150	13	10º	DCMT 0702□□	CS2560	FT-7	0.15	0.15	6005-570	6005-670
S12M-SDUCR07	S12M-SDUCL07	12	9	150	16	8º				0.18	0.18	6005-571	6005-671
S16Q-SDUCR07	S16Q-SDUCL07	16	11	180	20	6º				0.28	0.28	6005-572	6005-672
S20R-SDUCR11	S20R-SDUCL11	20	13	200	25	8º	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-573	6005-673
S25R-SDUCR11	S25R-SDUCL11	25	17	200	32	4º				0.60	0.60	6005-574	6005-674
S10M-SDQCR07	S10M-SDQCL07	10	7	150	13	10º	DCMT 0702□□	CS2560	FT-7	0.15	0.15	6005-600	6005-700
S12M-SDQCR07	S12M-SDQCL07	12	9	150	16	8º				0.18	0.18	6005-601	6005-701
S16Q-SDQCR07	S16Q-SDQCL07	16	11	180	20	6º				0.28	0.28	6005-602	6005-702
S20R-SDQCR11	S20R-SDQCL11	20	13	200	25	8º	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-603	6005-703
S25R-SDQCR11	S25R-SDQCL11	25	17	200	32	4º				0.60	0.60	6005-604	6005-704



ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand									Right	Left	Right	Left
S12M-SDZCR07	S12M-SDZCL07	12	10.5	150	14	9º	DCMT 0702□□	CS2560	FT-7	0.18	0.18	6005-630	6005-730
S16Q-SDZCR07	S16Q-SDZCL07	16	12.5	180	16	8º				0.28	0.28	6005-631	6005-731
S20R-SDZCR11	S20R-SDZCL11	20	15.5	200	20	8º	DCMT 11T3□□	CS35095	FT-15	0.45	0.45	6005-632	6005-732
S25R-SDZCR11	S25R-SDZCL11	25	18	200	25	6º				0.60	0.60	6005-633	6005-733

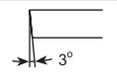
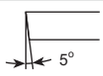
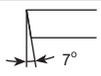
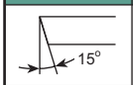
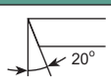
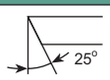
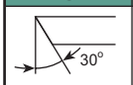
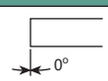
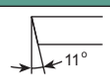




ORDER NO.		DIMENSIONS					INSERT	PARTS		WEIGHT (kg)		CODE NO.	
Righthand	Lefthand	D	F	l	B	Kº				Right	Left	Right	Left
S16Q-SVUCR11	S16Q-SVUCL11	16	13	180	22	7º	VCMT 1103□□	CS2560	FT-7	0.28	0.28	6005-660	6005-760
S20R-SVUCR11	S20R-SVUCL11	20	15	200	27	6º				0.45	0.45	6005-661	6005-761
S25R-SVUCR16	S25R-SVUCL16	25	18	200	33	4º	VCMT 1604	CS3590	FT-15	0.60	0.60	6005-662	6005-762
S16Q-SVQCR11	S16Q-SVQCL11	16	13	180	22	7º	VCMT 1103□□	CS2560	FT-7	0.28	0.28	6005-690	6005-790
S20R-SVQCR11	S20R-SVQCL11	20	15	200	27	6º				0.45	0.45	6005-691	6005-791
S25R-SVQCR16	S25R-SVQCL16	25	18	200	33	4º	VCMT 1604	CS3590	FT-15	0.60	0.60	6005-692	6005-792

Technical Data

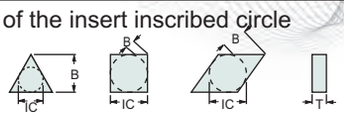
Milling & Turning Insert Identification

A	B	C
		
3°	5°	7°
D	**E**	**F**
		
15°	20°	25°
G	**H**	**I**
		
30°	0°	11°

2 Relief angle

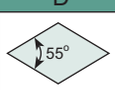
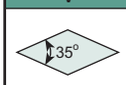
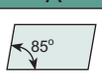
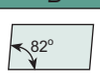
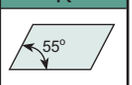
tolerances

IC: theoretical diameter of the insert inscribed circle
T: thickness
B: see figure below

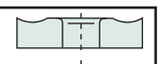
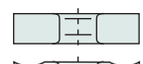
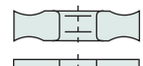
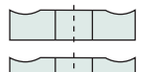
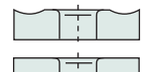
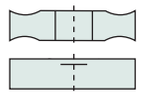
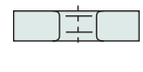
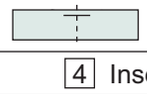


tolerance class	tolerance on "IC"		tolerance on "B"		tolerance on "T"	
	in	mm	in	mm	in	mm
C	±0.010	±0.025	±0.0005	±0.013	±0.001	±0.025
H	±0.005	±0.013	±0.0005	±0.013	±0.001	±0.025
E	±0.010	±0.025	±0.0010	±0.025	±0.001	±0.025
G	±0.010	±0.025	±0.0010	±0.025	±0.005	±0.13
M	see tables at right		see tables at right		±0.005	±0.13
U	see tables at right		see tables at right		±0.005	±0.13

3 tolerance

H	O	P	R	S
T	**C**	**D**	**E**	**M**
				
80°	55°	75°	86°	
V	**L**	**A**	**B**	**K**
				
35°		85°	82°	55°

1 Shape

N		T		
R		Q		
F		U		
A		B		
M		H		
G		C		
W		J		

4 Insert type

inch	**C**	**N**	**M**	**G**	**-**	**4**	**3**	**2**	□	□	□
(metric)	**C**	**N**	**M**	**G**		**12**	**04**	**08**	□	□	□
position	1	2	3	4		5	6	7	8	9	10

5 Size

inch	IC		metric cutting edge length						
	in	mm	C	D	R	S	T	V	W
1.2 (5)	5/22	3.97	-	04	03	03	06	-	-
1.5 (6)	3/16	4.76	04	05	04	04	08	08	-
1.8 (7)	7/22	5.56	05	06	05	05	09	09	03
-	0.236	6.00	-	-	06	-	-	-	-
2	1/4	6.35	06	07	06	06	11	11	04
2.5	5/16	7.94	08	09	07	07	13	13	05
-	0.315	8.00	-	-	08	-	-	-	-
3	3/8	9.52	09	11	09	09	16	16	06
-	0.394	10.00	-	-	10	-	-	-	-
3.5	1/16	11.11	11	13	11	11	19	19	07
-	0.472	12.00	-	-	12	-	-	-	-
4	1/2	12.70	12	15	12	12	22	22	08
4.5	9/16	14.29	14	17	14	14	24	24	09
5	5/8	15.88	16	19	15	15	27	27	10
-	0.630	16.00	-	-	16	-	-	-	-
5.5	11/16	17.46	17	21	17	17	30	30	11
6	3/4	19.05	19	23	19	19	33	33	13
-	0.787	20.00	-	-	20	-	-	-	-
7	7/8	22.22	22	27	22	22	38	38	15
-	0.984	25.00	-	-	25	-	3	-	-
8	1	25.40	25	31	25	25	44	44	17
10	1-1/4	31.75	32	38	31	31	54	54	21
-	1.260	32.00	-	-	32	-	-	-	-

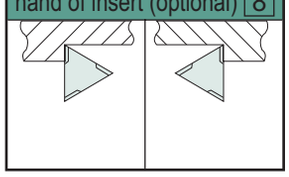
NOTE: Inch sizes in parenthesis for "alternate sizes" D or E (under 1/4 inch IC.)

6 thickness

thickness		symbol	
in	mm	inch	metric
1/32	0.79	0.5(1)	-
1/16	1.59	1(2)	01
5/64	1.98	1.2	T1
3/32	2.38	1.5(3)	02
1/8	3.18	2	03
5/22	3.97	2.5	T3
3/16	4.76	3	04
7/32	5.56	3.5	05
1/4	6.35	4	06
5/16	7.94	5	07
3/8	9.52	6	09
7/16	11.11	7	11
1/2	12.70	8	12

NOTE: Inch sizes in parenthesis for "Alternate sizes" D or E (under 1/4 inch IC.)

hand of insert (optional) 8



9 & 10 cutting edge condltion or chip control featrures (optional)

T - negative land
K - light feed chip control.
double sided Kenioc insert
M - heavy feed chip control.
deep floor Kenioc
N - narrow land control insert with chip control on one side
W - heavy-duty chip control.
wide land Kenioc insert one side
J - polished to 4-microinch A4 (rake face only)
UF - ultra-fine finsishing
See Technical Section for additional conditions and chip control features

7 corner radius

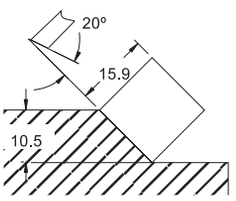
corner radius		symbol	
in	mm	inch	metric
.004	0.1	0	01
.008	0.2	0.5	02
1/64	0.4	1	04
1/32	0.8	2	08
3/64	1.2	3	12
1/16	1.6	4	16
5/64	2.0	5	20
3/32	2.4	6	24
7/64	2.8	7	28
1/8	3.2	8	32
round insert (inch)		-	00
round insert (metric)		-	M0

Insert For Face Mill Cutter

EXAMPLE

Positive
Axial Rake
Radial Rake

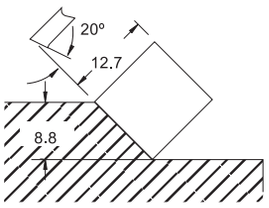
45°



$^{5}/_{8}$ x $^{3}/_{16}$ Insert
SEC 53
SECN 1504
SEKN 1504
FOR SE-545

Positive
Axial Rake
Radial Rake

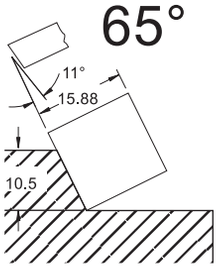
45°



$^{1}/_{2}$ x $^{1}/_{8}$ Insert
SEC 42
SECN 1203
SEKN 1203
FOR SE-445

Positive
Axial Rake
Positive
Radial Rake

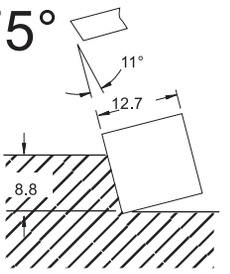
65°



$^{5}/_{8}$ x $^{3}/_{16}$ Insert
SPU-53, SPCN 1504
SPG-53, SPKN 1504
FOR SP-TYPE

Positive
Axial Rake
Radial Rake

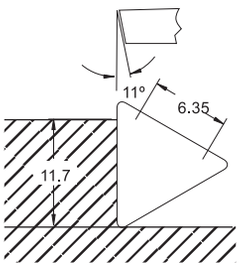
75°



$^{1}/_{2}$ x $^{1}/_{8}$ Insert
SPU-42, SPKN 1203
SPG-42, SPMN 1203
FOR FP-TYPE

Positive
Axial Rake

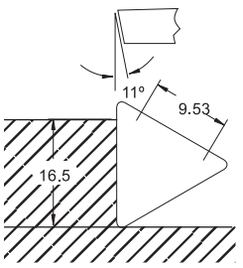
90°



$^{1}/_{4}$ x $^{3}/_{32}$ Insert
TPG-21
TPMN 1102
FOR SAE-TYPE

Positive
Axial Rake

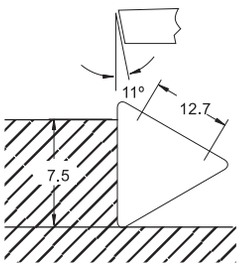
90°



$^{3}/_{8}$ x $^{1}/_{8}$ Insert
TPU-32
TPG-32
TPMN 1603
TPCN 1603
FOR SAE-TYPE

Positive
Axial Rake
Radial Rake

90°

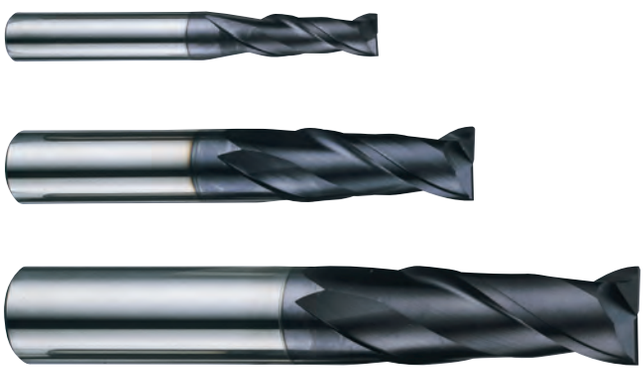


$^{1}/_{2}$ x $^{3}/_{16}$ Insert
TPK-43
TPKN 2204
TPMN 2204
FOR TP-TYPE

Solid Carbide End Mills For <48HRC

VERTEX®

Micro Grain 10% Co Grade
2 Flute



Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper
VE112F	60-250	30-100	60-80	30-150	30-180	40-120	100-450
VE122F							
VE125F	60-180	20-80	40-80	30-130	30-120	40-100	100-300
VE127F							

Stub Length(Order No. VE112F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE112-1.0	1.0	3	3.0	38	6007-001
VE112-1.5	1.5	3	5.0	38	6007-002
VE112-2.0	2.0	3	6.0	38	6007-003
VE112-2.5	2.5	3	8.0	38	6007-004
VE112-3.0	3.0	3	8.0	38	6007-005
VE112-3.5	3.5	4	10.0	50	6007-006
VE112-4.0	4.0	4	11.0	50	6007-007
VE112-4.5	4.5	5	11.0	50	6007-008
VE112-5.0	5.0	5	13.0	50	6007-009
VE112-5.5	5.5	6	13.0	50	6007-010
VE112-6.0	6.0	6	16.0	50	6007-011

Long Length(Order No. VE125F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE125-3	3	6	12	70	6007-050
VE125-4	4	6	15	70	6007-051
VE125-5	5	6	20	80	6007-052
VE125-6	6	6	20	80	6007-053
VE125-8	8	8	25	100	6007-055
VE125-10	10	10	30	100	6007-057
VE125-12	12	12	35	110	6007-059
VE125-14	14	16	40	120	6007-060
VE125-16	16	16	50	140	6007-061
VE125-20	20	20	55	160	6007-062

Standard Length(Order No. VE122F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE122-1.0	1.0	4	3	50	6007-020
VE122-1.5	1.5	4	5	50	6007-021
VE122-2.0	2.0	4	6	50	6007-022
VE122-2.5	2.5	4	8	50	6007-023
VE122-3.0	3.0	6	8	50	6007-024
VE122-3.5	3.5	6	10	50	6007-025
VE122-4.0	4.0	6	11	50	6007-026
VE122-4.5	4.5	6	11	50	6007-027
VE122-5.0	5.0	6	13	50	6007-028
VE122-5.5	5.5	6	13	50	6007-029
VE122-6.0	6.0	6	16	50	6007-030
VE122-7.0	7.0	8	20	60	6007-031
VE122-8.0	8.0	8	20	60	6007-032
VE122-9.0	9.0	10	22	72	6007-033
VE122-10.0	10.0	10	25	72	6007-034
VE122-11.0	11.0	12	26	75	6007-035
VE122-12.0	12.0	12	30	75	6007-036
VE122-14.0	14.0	16	32	90	6007-037
VE122-16.0	16.0	16	40	100	6007-038
VE122-18.0	18.0	20	40	100	6007-039
VE122-20.0	20.0	20	40	100	6007-040

Extra Long Length(Order No. VE127F-Dia)

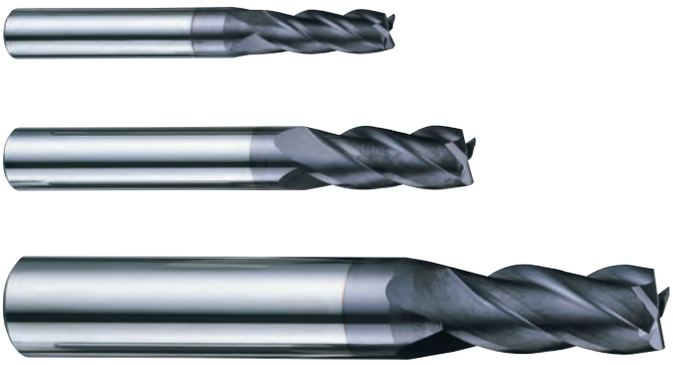
Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE127-3	3	6	12	100	6006-090
VE127-4	4	6	15	100	6006-091
VE127-5	5	6	20	100	6006-092
VE127-6	6	6	20	100	6006-093
VE127-8	8	8	25	150	6006-094
VE127-10	10	10	30	150	6006-095
VE127-12	12	12	35	180	6006-096
VE127-16	16	16	50	2100	6006-097
VE127-20	20	20	55	2100	6006-098

Solid Carbide End Mills For <48HRC

VERTEX®

Micro Grain 10% Co Grade
4 Flute



Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper
VE114F	60-250	30-100	60-80	30-150	30-180	40-120	100-450
VE124F							
VE126F	60-180	20-80	40-80	30-130	30-120	40-100	100-300

Standard Length(Order No. VE124F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE124-1.0	1.0	4	3	50	6007-100
VE124-1.5	1.5	4	5	50	6007-101
VE124-2.0	2.0	4	6	50	6007-102
VE124-2.5	2.5	4	8	50	6007-103
VE124-3.0	3.0	6	8	50	6007-104
VE124-3.5	3.5	6	10	50	6007-105
VE124-4.0	4.0	6	11	50	6007-106
VE124-4.5	4.5	6	11	50	6007-107
VE124-5.0	5.0	6	13	50	6007-108
VE124-5.5	5.5	6	13	50	6007-109
VE124-6.0	6.0	6	16	50	6007-110
VE124-7.0	7.0	8	20	60	6007-111
VE124-8.0	8.0	8	20	60	6007-112
VE124-9.0	9.0	10	22	72	6007-113
VE124-10.0	10.0	10	25	72	6007-114
VE124-11.0	11.0	12	26	75	6007-115
VE124-12.0	12.0	12	30	75	6007-116
VE124-14.0	14.0	16	32	90	6007-117
VE124-16.0	16.0	16	38	100	6007-118
VE124-18.0	18.0	20	38	100	6007-119
VE124-20.0	20.0	20	38	100	6007-120

Stub Length(Order No. VE114F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE114-1.0	1.0	3	3.0	38	6007-080
VE114-1.5	1.5	3	5.0	38	6007-081
VE114-2.0	2.0	3	6.0	38	6007-082
VE114-2.5	2.5	3	7.0	38	6007-083
VE114-3.0	3.0	3	9.0	38	6007-084
VE114-3.5	3.5	4	10.0	50	6007-085
VE114-4.0	4.0	4	11.0	50	6007-086
VE114-4.5	4.5	5	11.0	50	6007-087
VE114-5.0	5.0	5	13.0	50	6007-088
VE114-5.5	5.5	6	13.0	50	6007-089
VE114-6.0	6.0	6	16.0	50	6007-090

Long Length(Order No. VE126F-Dia)

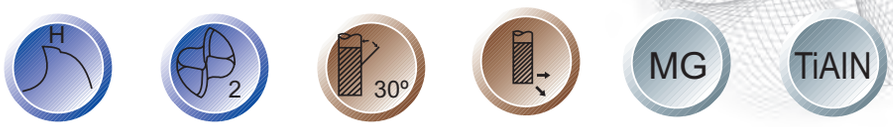
Unit:mm

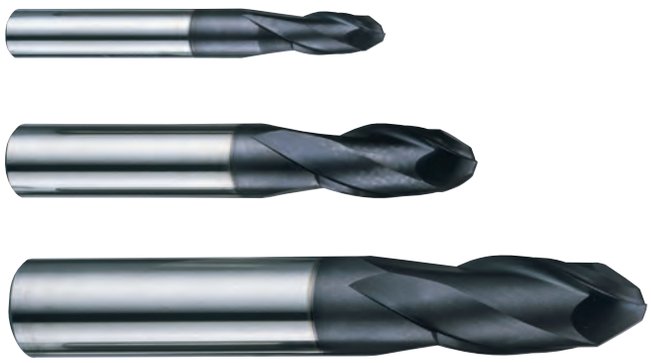
ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE126-3	3	4	12	70	6007-130
VE126-4	4	4	15	70	6007-131
VE126-5	5	6	20	80	6007-132
VE126-6	6	6	20	80	6007-133
VE126-8	8	8	25	100	6007-135
VE126-10	10	10	30	100	6007-137
VE126-12	12	12	35	110	6007-139
VE126-14	14	16	40	120	6007-140
VE126-16	16	16	50	140	6007-141
VE126-20	20	20	55	160	6007-142

Solid Carbide Ball Nose End Mills For <48HRC

VERTEX®

Micro Grain 10% Co Grade
2 Flute





Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper
VB221F	60-250	30-100	60-80	30-150	30-180	40-120	100-450
VB222F							
VB232F	60-180	20-80	40-80	30-130	30-120	40-100	100-300

Standard Length(Order No. VB222F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB222-1	1.00x0.50R	4	2.5	50	6007-180
VB222-1.5	1.50x0.75R	4	4	50	6007-181
VB222-2	2.00x1.00R	4	5	50	6007-182
VB222-2.5	2.50x1.25R	4	6	50	6007-183
VB222-3	3.00x1.50R	6	6	50	6007-184
VB222-4	4.00x2.00R	6	8	50	6007-186
VB222-5	5.00x2.50R	6	10	50	6007-188
VB222-6	6.00x3.00R	6	12	50	6007-190
VB222-7	7.00x3.50R	8	14	60	6007-191
VB222-8	8.00x4.00R	8	14	60	6007-192
VB222-9	9.00x4.50R	10	18	72	6007-193
VB222-10	10.00x5.00R	10	18	72	6007-194
VB222-12	12.00x6.00R	12	22	75	6007-196
VB222-14	14.00x7.00R	16	26	100	6007-197
VB222-16	16.00x8.00R	16	30	100	6007-198
VB222-20	20.00x10.0R	20	38	100	6007-200

Stub Length(Order No. VB221F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB221-1	1.0x0.50R	3	2.5	38	6007-160
VB221-1.5	1.5x0.75R	3	4.0	38	6007-161
VB221-2	2.0x1.00R	3	5.0	38	6007-162
VB221-2.5	2.5x1.25R	3	6.0	38	6007-163
VB221-3	3.0x1.50R	3	6.0	38	6007-164
VB221-3.5	3.5x1.75R	4	8.0	50	6007-165
VB221-4	4.0x2.00R	4	8.0	50	6007-166
VB221-4.5	4.5x2.25R	5	10.0	50	6007-167
VB221-5	5.0x2.50R	5	10.0	50	6007-168
VB221-5.5	5.5x2.75R	6	12.0	50	6007-169
VB221-6	6.0x3.00R	6	12.0	50	6007-170

Long Length(Order No. VB232F-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VB232-3	3.0x1.50R	6	6	70	6007-210
VB232-4	4.0x2.00R	6	8	70	6007-211
VB232-5	5.0x2.50R	6	10	80	6007-212
VB232-6	6.0x3.00R	6	12	80	6007-213
VB232-8	8.0x4.00R	8	14	100	6007-215
VB232-10	10.0x5.00R	10	18	100	6007-217
VB232-12	12.0x6.00R	12	22	110	6007-219
VB232-14	14.0x7.00R	16	26	120	6007-220
VB232-16	16.0x8.00R	16	30	140	6007-221
VB232-20	20.0x10.0R	20	38	160	6007-222

Solid Carbide End Mills For <68HRC

Ultra Micro Grain 12% Co Grade
6 Flute

Work Material / Velocity m/min

GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.5 Hardened steels 56-68 HRC	GR.6 Iron
100-200	60-150	20-50	120-300

Standard Length(Order No. VE166X-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE166-3	3	6	8	50	6007-240
VE166-4	4	6	11	50	6007-241
VE166-5	5	6	13	50	6007-242
VE166-6	6	6	16	50	6007-243
VE166-8	8	8	20	60	6007-244
VE166-10	10	10	22	72	6007-245
VE166-12	12	12	26	75	6007-246
VE166-16	16	16	38	100	6007-247
VE166-20	20	20	38	100	6007-248

Long Length(Order No. VE167X-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VE167-6	6	6	26	80	6007-250
VE167-8	8	8	36	100	6007-251
VE167-10	10	10	46	100	6007-252
VE167-12	12	12	56	110	6007-253
VE167-16	16	16	66	140	6007-254
VE167-20	20	20	76	160	6007-255

4 Flute Carbide End Mill Set VE124 18PCS/SET In Wooden Box With

ORDER NO.VE124-A CODE NO.6007-257

NEW

SET INCLUDING
VE124-3.0X3PCS
VE124-4.0X3PCS
VE124-6.0X3PCS
VE124-8.0X3PCS
VE124-10.0X3PCS
VE124-12.0X3PCS

2 Flute Carbide Ball Nose End Mill Set VB222 9PCS/SET In Wooden Box With

ORDER NO.VB222-A CODE NO.6007-258

NEW

SET INCLUDING
VB222-4X3PCS
VB222-6X3PCS
VB222-8X3PCS

Solid Carbide NC/CNC Spot Drills

Micro Grain 10% Co Grade

Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron
30-80	20-60	15-25	10-20	40-100

GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
20-40	15-40	60-300	80-400

Standard Length 90º Angle(Order No. VD903-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD903-3	3	3	10	38	6007-260
VD903-4	4	4	12	50	6007-261
VD903-5	5	5	15	50	6007-262
VD903-6	6	6	20	60	6007-263
VD903-8	8	8	25	60	6007-264
VD903-10	10	10	25	72	6007-265
VD903-12	12	12	30	75	6007-266
VD903-16	16	16	35	100	6007-267
VD903-20	20	20	40	100	6007-268

Standard Length 120º Angle(Order No. VD913-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD913-3	3	3	10	38	6007-270
VD913-4	4	4	12	50	6007-271
VD913-5	5	5	15	50	6007-272
VD913-6	6	6	20	60	6007-273
VD913-8	8	8	25	60	6007-274
VD913-10	10	10	25	72	6007-275
VD913-12	12	12	30	75	6007-276
VD913-16	16	16	35	100	6007-277
VD913-20	20	20	40	100	6007-278

Long Length 90º Angle(Order No. VD904-Dia)

Unit:mm

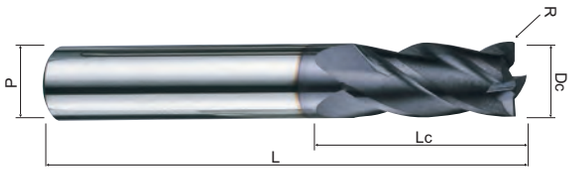
ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD904-6	6	6	20	100	6007-280
VD904-8	8	8	25	125	6007-281
VD904-10	10	10	25	150	6007-282
VD904-12	12	12	30	150	6007-283
VD904-16	16	16	35	150	6007-284
VD904-20	20	20	40	150	6007-285

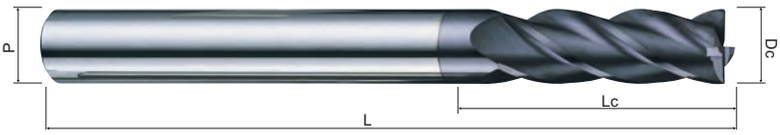
Long Length 120º Angle(Order No. VD914-Dia)

Unit:mm

ORDER NO.	Dia of Mill Tol e8	Shank Dia mm	Flute Length mm	Overall Length mm	CODE NO.
VD914-6	6	6	20	100	6007-290
VD914-8	8	8	25	125	6007-291
VD914-10	10	10	25	150	6007-292
VD914-12	12	12	30	150	6007-293
VD914-16	16	16	35	150	6007-294
VD914-20	20	20	40	150	6007-295

Finishing End Mills <56HRC





Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
60-300	30-120	60-120	40-100	40-180	40-120	40-120

Standard Length(Order No. VE164X-Dc)

Unit:mm

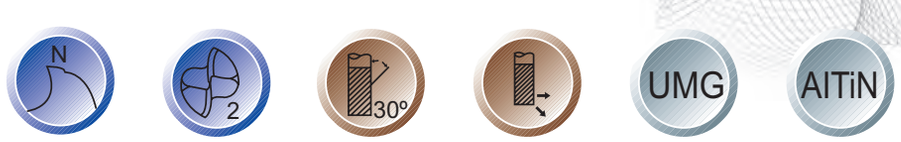
ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE164-1.0	1.0	3	50	4	6007-300
VE164-1.5	1.5	5	50	4	6007-301
VE164-2.0	2.0	6	50	4	6007-302
VE164-2.5	2.5	8	50	4	6007-303
VE164-3.0	3.0	8	50	6	6007-304
VE164-4.0	4.0	11	50	6	6007-306
VE164-5.0	5.0	13	50	6	6007-308
VE164-6.0	6.0	16	50	6	6007-310
VE164-8.0	8.0	20	60	8	6007-312
VE164-10.0	10.0	25	72	10	6007-314
VE164-12.0	12.0	30	75	12	6007-316
VE164-14.0	14.0	32	90	16	6007-317
VE164-16.0	16.0	40	100	16	6007-318
VE164-18.0	18.0	40	100	20	6007-319
VE164-20.0	20.0	40	100	20	6007-320

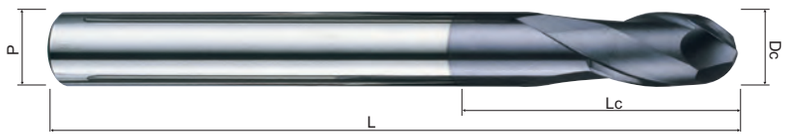
Long Length(Order No. VE165X-Dc)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE165-3	3	12	70	6	6007-330
VE165-4	4	15	70	6	6007-331
VE165-5	5	20	80	6	6007-332
VE165-6	6	20	80	6	6007-333
VE165-8	8	25	100	8	6007-335
VE165-10	10	30	100	10	6007-337
VE165-12	12	35	110	12	6007-339
VE165-14	14	40	120	16	6007-340
VE165-16	16	50	140	16	6007-341
VE165-20	20	55	160	20	6007-342

Ball Nose End Mills <56HRC





Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
VB262X	80-350	60-200	40-150	50-250	30-180	40-120
VB263X	80-250	60-160	40-120	50-200	30-150	40-100

Standard Length(Order No. VB262X-Dc)

Unit:mm

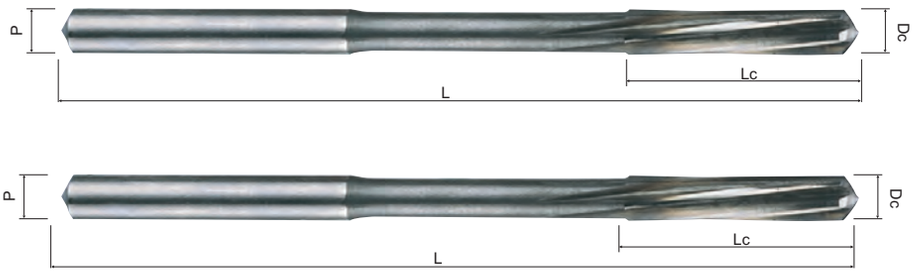
ORDER NO.	Dc e8	R ±0.01	LC mm	L mm	d h6	CODE NO.
VB262-1.0	1.0	0.5R	2	50	4	6007-350
VB262-1.5	1.5	0.75R	3	50	4	6007-351
VB262-2.0	2.0	1.0R	4	50	4	6007-352
VB262-2.5	2.5	1.25R	5	50	4	6007-353
VB262-3.0	3.0	1.5R	6	50	6	6007-354
VB262-4.0	4.0	2.0R	8	50	6	6007-355
VB262-5.0	5.0	2.5R	10	50	6	6007-356
VB262-6.0	6.0	3.0R	12	50	6	6007-357
VB262-8.0	8.0	4.0R	14	60	8	6007-359
VB262-10.0	10.0	5.0R	18	72	10	6007-361
VB262-12.0	12.0	6.0R	22	75	12	6007-362
VB262-14.0	14.0	7.0R	26	100	16	6007-363
VB262-16.0	16.0	8.0R	30	100	16	6007-364
VB262-20.0	20.0	10.0R	38	100	20	6007-365

Long Length(Order No. VB263X-Dc)

Unit:mm

ORDER NO.	Dc e8	R ±0.01	LC mm	L mm	d h6	CODE NO.
VB263-3	3	1.5R	8	70	6	6007-374
VB263-4	4	2.0R	8	70	6	6007-375
VB263-5	5	2.5R	10	80	6	6007-376
VB263-6	6	3.0R	12	80	6	6007-377
VB263-8	8	4.0R	14	100	8	6007-379
VB263-10	10	5.0R	18	100	10	6007-381
VB263-12	12	6.0R	22	110	12	6007-382
VB263-14	14	7.0R	26	120	16	6007-383
VB263-16	16	8.0R	30	140	16	6007-384
VB263-20	20	10.0R	38	160	20	6007-385

Machine Reamers In Steps of 0.5mm



Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
7-25	7-15	5-10	5-10	10-22	10-25	5-20	30-45	20-50

※ 2.0-9.0 VHM Solid Carbide
※ 10.0-20.0 HM Carbide Tipped

Straight Shank(Order No. VR301-Dc)

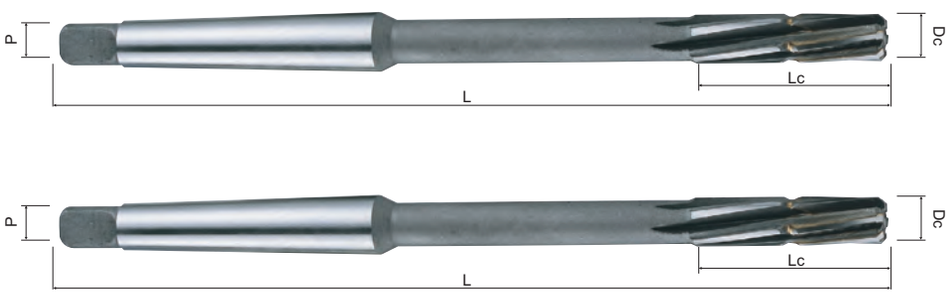
Unit:mm

ORDER NO.	Dc H7	Lc mm	L mm	d mm	Z teeth	CODE NO.
VR301-2.0	2.0	11	49	2.0	4	6007-390
VR301-2.5	2.5	14	57	2.5	4	6007-391
VR301-3.0	3.0	15	61	3.0	4	6007-392
VR301-3.5	3.5	18	70	3.5	4	6007-393
VR301-4.0	4.0	19	75	4.0	4	6007-394
VR301-4.5	4.5	21	80	4.5	4	6007-395
VR301-5.0	5.0	23	86	5.0	6	6007-396
VR301-5.5	5.5	26	93	5.5	6	6007-397
VR301-6.0	6.0	26	93	6.0	6	6007-398
VR301-7.0	7.0	31	109	7.0	6	6007-400
VR301-8.0	8.0	33	117	8.0	6	6007-402
VR301-9.0	9.0	36	125	9.0	6	6007-404
VR301-10.0	10.0	38	133	10.0	6	6007-406

※ 2.0-9.0 VHM Solid Carbide ※ 10.0-20.0 HM Carbide Tipped

ORDER NO.	Dc H7	Lc mm	L mm	d mm	Z teeth	CODE NO.
VR301-11.0	11.0	41	142	10.0	6	6007-408
VR301-12.0	12.0	44	151	10.0	6	6007-410
VR301-13.0	13.0	44	151	10.0	6	6007-412
VR301-14.0	14.0	47	160	12.5	6	6007-414
VR301-15.0	15.0	50	162	12.5	6	6007-416
VR301-16.0	16.0	52	170	12.5	6	6007-418
VR301-17.0	17.0	54	175	14.0	6	6007-419
VR301-18.0	18.0	56	182	14.0	6	6007-420
VR301-19.0	19.0	58	189	16.0	6	6007-421
VR301-20.0	20.0	60	195	16.0	6	6007-422

Machine Reamers Carbide Tipped



Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
7-25	7-15	5-10	5-10	10-22	10-25	5-20	30-45	20-50

Taper Shank(Order No. VR303-Dc)

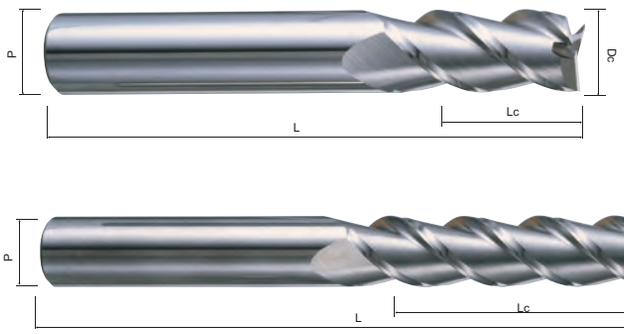
Unit:mm

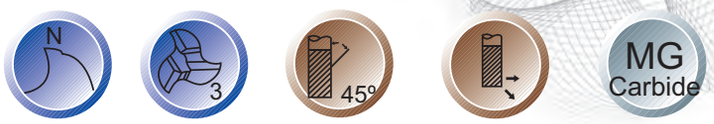
ORDER NO.	Dc H7	Lc mm	L mm	d mt	Z teeth	CODE NO.
VR303-10.0	10.0	38	168	1	6	6007-430
VR303-11.0	11.0	41	175	1	6	6007-431
VR303-12.0	12.0	44	182	1	6	6007-432
VR303-13.0	13.0	44	182	1	6	6007-433
VR303-14.0	14.0	47	189	1	6	6007-434
VR303-15.0	15.0	50	204	2	6	6007-435
VR303-16.0	16.0	52	210	2	6	6007-436
VR303-17.0	17.0	54	214	2	6	6007-437
VR303-18.0	18.0	56	219	2	6	6007-438
VR303-19.0	19.0	58	223	2	6	6007-439
VR303-20.0	20.0	60	228	2	6	6007-440
VR303-22.0	22.0	64	237	2	6	6007-441
VR303-24.0	24.0	68	268	3	8	6007-442

ORDER NO.	Dc H7	Lc mm	L mm	d mt	Z teeth	CODE NO.
VR303-25.0	25.0	68	268	3	8	6007-443
VR303-26.0	26.0	70	273	3	8	6007-444
VR303-28.0	28.0	71	277	3	8	6007-445
VR303-30.0	30.0	73	281	3	8	6007-446
VR303-32.0	32.0	77	317	4	8	6007-447
VR303-35.0	35.0	78	321	4	8	6007-448
VR303-36.0	36.0	79	325	4	8	6007-449
VR303-38.0	38.0	81	329	4	8	6007-450
VR303-40.0	40.0	81	329	4	8	6007-451

Universal End Mills

Professional For Aluminium, Copper, Steels





Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.3 Hardened steels < 48 HRC	GR.9 Copper	GR.10 Aluminium	GR.11 Plastics
VE133	40-120	30-50	100-200	100-450	150-200
VE135	25-70	20-30	60-120	60-300	80-120

Standard Length(Order No. VE133-Dia)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE133-1.0	1.0	3	38	3	6007-460
VE133-1.5	1.5	5	38	3	6007-461
VE133-2.0	2.0	6	38	3	6007-462
VE133-2.5	2.5	7	38	3	6007-463
VE133-3.0	3.0	9	38	3	6007-464
VE133-4.0	4.0	14	50	4	6007-465
VE133-5.0	5.0	16	50	5	6007-466
VE133-6.0	6.0	20	63	6	6007-467
VE133-7.0	7.0	20	63	8	6007-468
VE133-8.0	8.0	20	63	8	6007-469
VE133-9.0	9.0	22	72	10	6007-470
VE133-10.0	10.0	22	72	10	6007-471
VE133-12.0	12.0	26	75	12	6007-472
VE133-14.0	14.0	30	89	14	6007-473
VE133-16.0	16.0	32	89	16	6007-474
VE133-18.0	18.0	38	100	18	6007-475
VE133-20.0	20.0	38	100	20	6007-476

Long Length(Order No. VE135-Dia)

Unit:mm

ORDER NO.	Dc e8	Lc mm	L mm	d h6	CODE NO.
VE135-3	3	20	57	3	6007-480
VE135-4	4	20	57	4	6007-481
VE135-5	5	25	63	5	6007-482
VE135-6	6	28	75	6	6007-483
VE135-7	7	30	75	8	6007-484
VE135-8	8	30	75	8	6007-485
VE135-9	9	32	75	10	6007-486
VE135-10	10	32	75	10	6007-487
VE135-12	12	50	100	12	6007-488
VE135-14	14	57	127	14	6007-489
VE135-16	16	57	127	16	6007-490
VE135-20	20	57	127	20	6007-491

IT'S A VERTEX EXCELENT CARBIDE END MILL

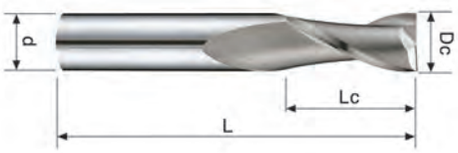
GOOD MATERIAL + GOOD PROCESS MACHINE + GOOD COATING EQUIPMENT

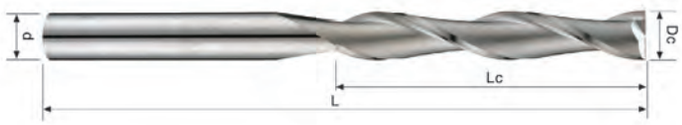
EXTRAMENT SWISSLAND

WALTER GERMANY

balzers BALINIT® coatings SWISSLAND

Universal End Mills





Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.9 Copper	GR.10 Aluminium	GR.11 Plastics
VEA72	40-120	30-50	40-80	100-200	100-450	150-180
VEA82	25-70	20-50	25-60	60-120	60-300	80-120

Standard Length(Order No. VEA72-Dia)

Unit:mm

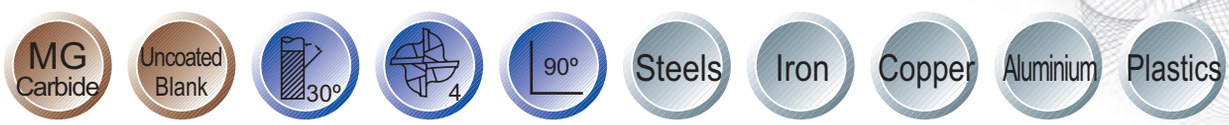
ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA72-0.3	0.3	0.8	38	3	6008-001
VEA72-0.4	0.4	1.0	38	3	6008-002
VEA72-0.5	0.5	1.2	38	3	6008-003
VEA72-0.6	0.6	1.5	38	3	6008-004
VEA72-0.7	0.7	1.8	38	3	6008-005
VEA72-0.8	0.8	2.0	38	3	6008-006
VEA72-0.9	0.9	2.5	38	3	6008-007
VEA72-1.0	1.0	3.0	38	3	6008-008
VEA72-1.5	1.5	5.0	38	3	6008-009
VEA72-2.0	2.0	6.0	38	3	6008-010
VEA72-2.5	2.5	7.0	38	3	6008-011
VEA72-3.0	3.0	9.0	38	3	6008-012
VEA72-3.5	3.5	12.0	50	4	6008-013
VEA72-4.0	4.0	14.0	50	4	6008-014
VEA72-4.5	4.5	14.0	50	5	6008-015
VEA72-5.0	5.0	16.0	50	5	6008-016
VEA72-5.5	5.5	16.0	50	6	6008-017
VEA72-6.0	6.0	20.0	63	6	6008-018
VEA72-7.0	7.0	20.0	63	8	6008-019
VEA72-8.0	8.0	20.0	63	8	6008-020
VEA72-9.0	9.0	22.0	72	10	6008-021
VEA72-10.0	10.0	22.0	72	10	6008-022
VEA72-11.0	11.0	26.0	75	12	6008-023
VEA72-12.0	12.0	26.0	75	12	6008-024
VEA72-14.0	14.0	32.0	89	14	6008-025
VEA72-16.0	16.0	32.0	89	16	6008-026
VEA72-18.0	18.0	38.0	100	18	6008-027
VEA72-20.0	20.0	38.0	100	20	6008-028

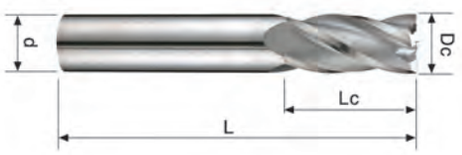
Long Length(Order No. VEA82-Dia)

Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA82-3	3	20	57	3	6008-040
VEA82-4	4	20	57	4	6008-041
VEA82-5	5	25	63	5	6008-042
VEA82-6	6	28	75	6	6008-043
VEA82-8	8	30	75	8	6008-044
VEA82-10	10	32	75	10	6008-045
VEA82-12	12	50	100	12	6008-046
VEA82-14	14	57	127	14	6008-047
VEA82-16	16	57	127	16	6008-048
VEA82-20	20	57	127	20	6008-049

Finishing End Mills





Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
VEA74	40-120	30-50	40-80	25-80	20-60	100-200	100-450
VEA84	25-70	20-30	25-60	15-50	15-35	60-120	60-300

Standard Length(Order No. VEA74-Dia)

Unit:mm

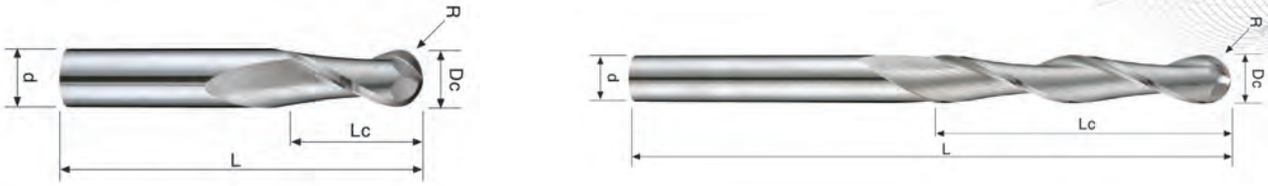
ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA74-1.0	1.0	3	38	3	6008-060
VEA74-1.5	1.5	5	38	3	6008-061
VEA74-2.0	2.0	6	38	3	6008-062
VEA74-2.5	2.5	7	38	3	6008-063
VEA74-3.0	3.0	9	38	3	6008-064
VEA74-3.5	3.5	12	50	4	6008-065
VEA74-4.0	4.0	14	50	4	6008-066
VEA74-4.5	4.5	14	50	5	6008-067
VEA74-5.0	5.0	16	50	5	6008-068
VEA74-5.5	5.5	16	50	6	6008-069
VEA74-6.0	6.0	20	63	6	6008-070
VEA74-7.0	7.0	20	63	8	6008-071
VEA74-8.0	8.0	20	63	8	6008-072
VEA74-9.0	9.0	22	72	10	6008-073
VEA74-10.0	10.0	22	72	10	6008-074
VEA74-11.0	11.0	26	75	12	6008-075
VEA74-12.0	12.0	26	75	12	6008-076
VEA74-14.0	14.0	32	89	14	6008-077
VEA74-16.0	16.0	32	89	16	6008-078
VEA74-18.0	18.0	38	100	18	6008-079
VEA74-20.0	20.0	38	100	20	6008-080

Long Length(Order No. VEA84-Dia)

Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEA84-3	3	20	57	3	6008-090
VEA84-4	4	20	57	4	6008-091
VEA84-5	5	25	63	5	6008-092
VEA84-6	6	28	75	6	6008-093
VEA84-8	8	30	75	8	6008-094
VEA84-10	10	32	75	10	6008-095
VEA84-12	12	50	100	12	6008-096
VEA84-14	14	57	127	14	6008-097
VEA84-16	16	57	127	16	6008-098
VEA84-20	20	57	127	20	6008-099

Ball Nose End Mills



Work Material / Velocity m/min

ORDER NO.	GR.1 Non alloyed steels Alloyed Steels	GR.3 Hardened steels < 48 HRC	GR.6 Iron	GR.9 Copper	GR.10 Aluminium	GR.11 Plastics
VBB12	40-120	30-50	40-80	60-120	60-300	80-120
VBB80	25-70	20-30	25-60	60-120	60-300	80-120

Standard Length(Order No. VBB12-Dia) Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB12-0.3	0.3	0.15R	0.6	38	3	6008-100
VBB12-0.4	0.4	0.20R	0.8	38	3	6008-101
VBB12-0.5	0.5	0.25R	1.0	38	3	6008-102
VBB12-0.6	0.6	0.30R	1.2	38	3	6008-103
VBB12-0.7	0.7	0.35R	1.4	38	3	6008-104
VBB12-0.8	0.8	0.40R	1.6	38	3	6008-105
VBB12-0.9	0.9	0.45R	2.0	38	3	6008-106
VBB12-1.0	1.0	0.50R	3.0	38	3	6008-107
VBB12-1.5	1.5	0.75R	5.0	38	3	6008-108
VBB12-2.0	2.0	1.00R	6.0	38	3	6008-109
VBB12-2.5	2.5	1.25R	7.0	38	3	6008-110
VBB12-3.0	3.0	1.50R	9.0	38	3	6008-111
VBB12-3.5	3.5	1.75R	12.0	50	4	6008-112
VBB12-4.0	4.0	2.00R	14.0	50	4	6008-113
VBB12-4.5	4.5	2.25R	16.0	50	5	6008-114
VBB12-5.0	5.0	2.50R	16.0	50	5	6008-115
VBB12-5.5	5.5	2.75R	16.0	50	6	6008-116
VBB12-6.0	6.0	3.00R	20.0	63	6	6008-117
VBB12-7.0	7.0	3.50R	20.0	63	8	6008-118
VBB12-8.0	8.0	4.00R	20.0	63	8	6008-119
VBB12-9.0	9.0	4.50R	22.0	72	10	6008-120

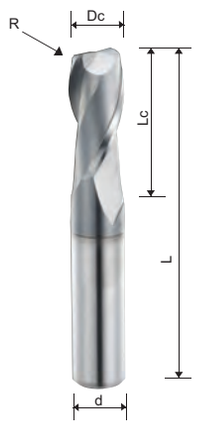
Standard Length(Order No. VBB12-Dia) Unit:mm

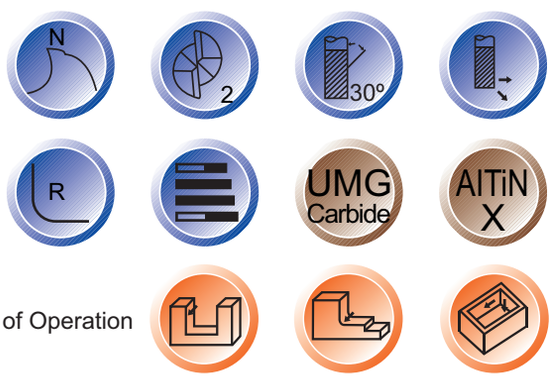
ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB12-10.0	10.0	5.00R	22.0	72	10	6008-121
VBB12-11.0	11.0	5.50R	26.0	75	12	6008-122
VBB12-12.0	12.0	6.00R	26.0	75	12	6008-123
VBB12-14.0	14.0	7.00R	32.0	89	14	6008-124
VBB12-16.0	16.0	8.00R	32.0	89	16	6008-125
VBB12-18.0	18.0	9.00R	38.0	100	18	6008-126
VBB12-20.0	20.0	10.00R	38.0	100	20	6008-127

Long Length(Order No. VBB80-Dia) Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VBB80-3	3	1.5R	20	57	3	6008-140
VBB80-4	4	2.0R	20	57	4	6008-141
VBB80-5	5	2.5R	25	63	5	6008-142
VBB80-6	6	3.0R	28	75	6	6008-143
VBB80-8	8	4.0R	30	75	8	6008-144
VBB80-10	10	5.0R	32	75	10	6008-145
VBB80-12	12	6.0R	50	100	12	6008-146
VBB80-14	14	7.0R	57	127	14	6008-147
VBB80-16	16	8.0R	57	127	16	6008-148
VBB80-20	20	10.0R	57	127	20	6008-149

End Mills With Corner Radius





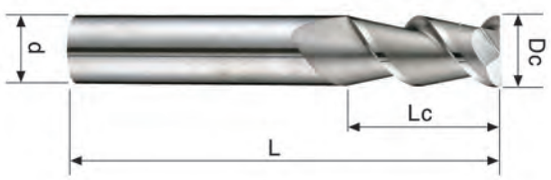
Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper
60-250	25-80	60-120	40-100	30-150	30-180	50-300	100-600

Standard Length(Order No. VB625X-Dia)

ORDER NO.	R ±0.01	Lc mm	L mm	d h6	CODE NO.
VB625-405	4.00x0.5R	11	50	6	6008-150
VB625-605	6.00x0.5R	16	50	6	6008-151
VB625-610	6.00x1.0R	16	50	6	6008-152
VB625-805	8.00x0.5R	20	60	8	6008-153
VB625-810	8.00x1.0R	20	60	8	6008-154
VB625-105	10.00x0.5R	22	72	10	6008-155
VB625-110	10.00x1.0R	22	72	10	6008-156
VB625-120	10.00x2.0R	22	72	10	6008-157
VB625-121	12.00x1.0R	26	75	12	6008-158
VB625-122	12.00x2.0R	26	75	12	6008-159

End Mills For Aluminium



Work Material / Velocity m/min

GR.10 Aluminium
100-1200

Standard Length(Order No. VEA92-Dia) Unit:mm

ORDER NO.	Dc h6	Lc mm	L mm	d h6	CODE NO.
VEA92-3	3	9	38	3	6008-160
VEA92-4	4	14	50	4	6008-161
VEA92-5	5	16	50	5	6008-162
VEA92-6	6	20	63	6	6008-163
VEA92-8	8	22	63	8	6008-164
VEA92-10	10	30	72	10	6008-165
VEA92-12	12	30	75	12	6008-166
VEA92-16	16	40	100	16	6008-167
VEA92-20	20	45	100	20	6008-168

Finishing End Mills

Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
60-250	35-150	60-120	40-100	60-160	50-180	40-350

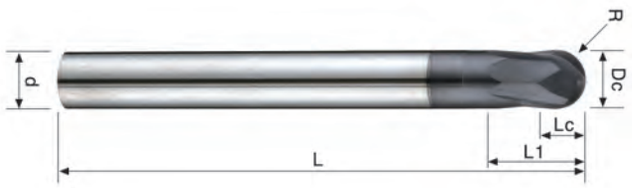
Standard Length(Order No. VEC40-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VEC40-1.0	1.0	3	50	4	6008-180
VEC40-1.5	1.5	5	50	4	6008-181
VEC40-2.0	2.0	6	50	4	6008-182
VEC40-2.5	2.5	8	50	4	6008-183
VEC40-3.0A	3.0A	8	50	4	6008-184
VEC40-4.0A	4.0A	11	50	4	6008-185
VEC40-3.0	3.0	8	50	6	6008-186
VEC40-4.0	4.0	11	50	6	6008-187
VEC40-5.0	5.0	13	50	6	6008-188
VEC40-6.0	6.0	16	50	6	6008-189
VEC40-7.0	7.0	20	60	8	6008-190
VEC40-8.0	8.0	20	60	8	6008-191
VEC40-9.0	9.0	25	72	10	6008-192
VEC40-10.0	10.0	25	72	10	6008-193
VEC40-12.0	12.0	30	75	12	6008-194
VEC40-14.0	14.0	40	100	16	6008-195
VEC40-16.0	16.0	45	100	16	6008-196
VEC40-20.0	20.0	50	110	20	6008-197

Long Length(Order No. VED40-Dia) Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h6	CODE NO.
VED40-3	3	15	80	4	6008-200
VED40-4	4	20	80	4	6008-201
VED40-5	5	25	100	6	6008-202
VED40-6	6	30	100	6	6008-203
VED40-8	8	35	100	8	6008-204
VED40-10	10	40	100	10	6008-205
VED40-12	12	45	110	12	6008-206
VED40-14	14	55	150	16	6008-207
VED40-16	16	60	150	16	6008-208
VED40-20	20	65	150	20	6008-209

Ball Nose End Mills



Work Material / Velocity m/min

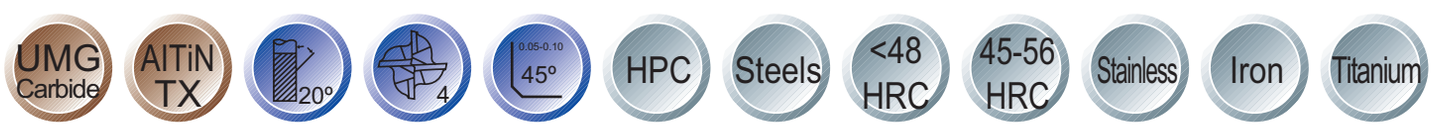
GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.5 Hardened steels 56-68 HRC	GR.6 Iron
120-350	100-210	30-120	80-350

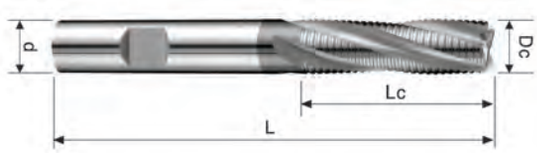
Long Length(Order No. VBB61-Dia)

Unit:mm

ORDER NO.	Dc h10	R ±0.01	Lc mm	L mm	d h6	L1 mm	CODE NO.
VBB61-1.0	1.0	0.50R	1.0	50	4	2	6008-220
VBB61-1.5	1.5	0.75R	1.5	50	4	3	6008-221
VBB61-2.0	2.0	1.00R	2.0	60	6	4	6008-222
VBB61-3.0	3.0	1.50R	3.0	70	6	6	6008-223
VBB61-4.0	4.0	2.00R	4.0	70	6	8	6008-224
VBB61-5.0	5.0	2.50R	5.0	80	6	10	6008-225
VBB61-6.0	6.0	3.00R	6.0	80	6	12	6008-226
VBB61-8.0	8.0	4.00R	8.0	100	8	16	6008-227
VBB61-10.0	10.0	5.00R	10.0	100	10	20	6008-228
VBB61-12.0	12.0	6.00R	12.0	110	12	24	6008-229

Roughing End Mills





Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel
100-180	40-80	80-140	60-100	100-180	20-50	30-50

Standard Length(Order No. VFF08-Dia)

Unit:mm

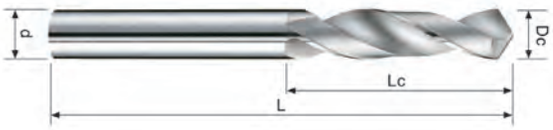
ORDER NO.	Dc h10	Lc mm	L mm	d h5	CODE NO.
VFF08-6	6	13	57	6	2008-240
VFF08-8	8	19	63	8	2008-241
VFF08-10	10	22	72	10	2008-242
VFF08-12	12	26	83	12	2008-243
VFF08-14	14	26	83	14	2008-244
VFF08-16	16	32	92	16	2008-245
VFF08-18	18	32	92	18	2008-246
VFF08-20	20	38	104	20	2008-247

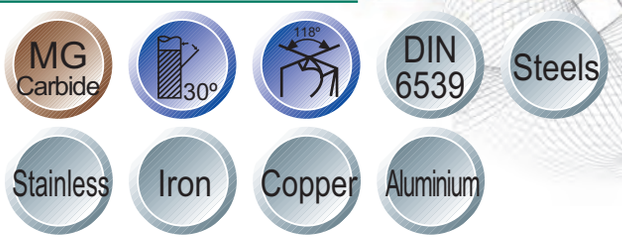
Long Length(Order No. VFF09-Dia)

Unit:mm

ORDER NO.	Dc h10	Lc mm	L mm	d h5	CODE NO.
VFF09-6	6	19	63	6	2008-260
VFF09-8	8	28	72	8	2008-261
VFF09-10	10	34	84	10	2008-262
VFF09-12	12	40	97	12	2008-263
VFF09-16	16	48	108	16	2008-264
VFF09-20	20	56	122	20	2008-265

Twist Drills





Straight Shank(Order No. VDD12-Dia)

Unit:mm

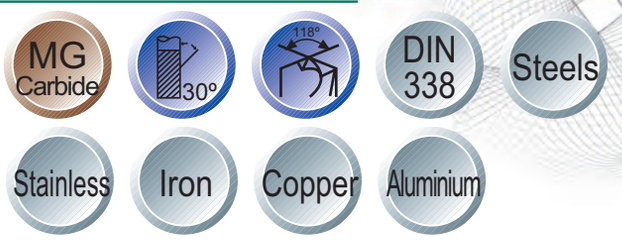
ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD12-1.0	1.0	6	26	6008-280
VDD12-1.1	1.1	7	28	6008-281
VDD12-1.2	1.2	8	30	6008-282
VDD12-1.3	1.3	8	30	6008-283
VDD12-1.4	1.4	9	32	6008-284
VDD12-1.5	1.5	9	32	6008-285
VDD12-1.6	1.6	10	34	6008-286
VDD12-1.7	1.7	10	34	6008-287
VDD12-1.8	1.8	11	36	6008-288
VDD12-1.9	1.9	11	36	6008-289
VDD12-2.0	2.0	12	38	6008-290
VDD12-2.1	2.1	12	38	6008-291
VDD12-2.2	2.2	13	40	6008-292
VDD12-2.3	2.3	13	40	6008-293
VDD12-2.4	2.4	14	43	6008-294
VDD12-2.5	2.5	14	43	6008-295
VDD12-2.6	2.6	14	43	6008-296
VDD12-2.7	2.7	16	46	6008-297
VDD12-2.8	2.8	16	46	6008-298
VDD12-2.9	2.9	16	46	6008-299
VDD12-3.0	3.0	16	46	6008-300
VDD12-3.1	3.1	18	49	6008-301
VDD12-3.2	3.2	18	49	6008-302
VDD12-3.3	3.3	18	49	6008-303
VDD12-3.4	3.4	20	52	6008-304
VDD12-3.5	3.5	20	52	6008-305
VDD12-3.6	3.6	20	52	6008-306
VDD12-3.7	3.7	20	52	6008-307
VDD12-3.8	3.8	22	55	6008-308
VDD12-3.9	3.9	22	55	6008-309
VDD12-4.0	4.0	22	55	6008-310
VDD12-4.1	4.1	22	55	6008-311
VDD12-4.2	4.2	22	55	6008-312
VDD12-4.3	4.3	24	58	6008-313
VDD12-4.4	4.4	24	58	6008-314
VDD12-4.5	4.5	24	58	6008-315
VDD12-4.6	4.6	24	58	6008-316
VDD12-4.7	4.7	24	58	6008-317
VDD12-4.8	4.8	26	62	6008-318
VDD12-4.9	4.9	26	62	6008-319
VDD12-5.0	5.0	26	62	6008-320
VDD12-5.1	5.1	26	62	6008-321
VDD12-5.2	5.2	26	62	6008-322
VDD12-5.3	5.3	26	62	6008-323
VDD12-5.4	5.4	28	66	6008-324
VDD12-5.5	5.5	28	66	6008-325
VDD12-5.6	5.6	28	66	6008-326
VDD12-5.7	5.7	28	66	6008-327
VDD12-5.8	5.8	28	66	6008-328
VDD12-5.9	5.9	28	66	6008-329

Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.6 Iron	GR.9 Copper	GR.10 Aluminium	GR.11 Plastics
50-80	70-100	100-180	100-250	80-200

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD12-6.0	6.0	28	66	6008-330
VDD12-6.1	6.1	31	70	6008-331
VDD12-6.2	6.2	31	70	6008-332
VDD12-6.3	6.3	31	70	6008-333
VDD12-6.4	6.4	31	70	6008-334
VDD12-6.5	6.5	31	70	6008-335
VDD12-6.6	6.6	31	70	6008-336
VDD12-6.7	6.7	31	70	6008-337
VDD12-6.8	6.8	34	74	6008-338
VDD12-6.9	6.9	34	74	6008-339
VDD12-7.0	7.0	34	74	6008-340
VDD12-7.1	7.1	34	74	6008-341
VDD12-7.2	7.2	34	74	6008-342
VDD12-7.3	7.3	34	74	6008-343
VDD12-7.4	7.4	34	74	6008-344
VDD12-7.5	7.5	34	74	6008-345
VDD12-7.6	7.6	37	79	6008-346
VDD12-7.7	7.7	37	79	6008-347
VDD12-7.8	7.8	37	79	6008-348
VDD12-7.9	7.9	37	79	6008-349
VDD12-8.0	8.0	37	79	6008-350
VDD12-8.1	8.1	37	79	6008-351
VDD12-8.2	8.2	37	79	6008-352
VDD12-8.3	8.3	37	79	6008-353
VDD12-8.4	8.4	37	79	6008-354
VDD12-8.5	8.5	37	79	6008-355
VDD12-8.6	8.6	40	84	6008-356
VDD12-8.7	8.7	40	84	6008-357
VDD12-8.8	8.8	40	84	6008-358
VDD12-8.9	8.9	40	84	6008-359
VDD12-9.0	9.0	40	84	6008-360
VDD12-9.1	9.1	40	84	6008-361
VDD12-9.2	9.2	40	84	6008-362
VDD12-9.3	9.3	40	84	6008-363
VDD12-9.4	9.4	40	84	6008-364
VDD12-9.5	9.5	40	84	6008-365
VDD12-9.6	9.6	43	89	6008-366
VDD12-9.7	9.7	43	89	6008-367
VDD12-9.8	9.8	43	89	6008-368
VDD12-9.9	9.9	43	89	6008-369
VDD12-10.0	10.0	43	89	6008-370
VDD12-10.2	10.2	43	89	6008-371
VDD12-10.5	10.5	43	89	6008-372
VDD12-11.0	11.0	47	95	6008-373
VDD12-11.5	11.5	47	95	6008-374
VDD12-12.0	12.0	51	102	6008-375
VDD12-13.0	13.0	51	102	6008-376

Twist Drills



Straight Shank(Order No. VDD13-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD13-1.0	1.0	12	34	6008-390
VDD13-1.1	1.1	14	36	6008-391
VDD13-1.2	1.2	16	38	6008-392
VDD13-1.3	1.3	16	38	6008-393
VDD13-1.4	1.4	18	40	6008-394
VDD13-1.5	1.5	18	40	6008-395
VDD13-1.6	1.6	20	43	6008-396
VDD13-1.7	1.7	20	43	6008-397
VDD13-1.8	1.8	22	46	6008-398
VDD13-1.9	1.9	22	46	6008-399
VDD13-2.0	2.0	24	49	6008-400
VDD13-2.1	2.1	24	49	6008-401
VDD13-2.2	2.2	27	53	6008-402
VDD13-2.3	2.3	27	53	6008-403
VDD13-2.4	2.4	30	57	6008-404
VDD13-2.5	2.5	30	57	6008-405
VDD13-2.6	2.6	30	57	6008-406
VDD13-2.7	2.7	33	61	6008-407
VDD13-2.8	2.8	33	61	6008-408
VDD13-2.9	2.9	33	61	6008-409
VDD13-3.0	3.0	33	61	6008-410
VDD13-3.1	3.1	36	65	6008-411
VDD13-3.2	3.2	36	65	6008-412
VDD13-3.3	3.3	36	65	6008-413
VDD13-3.4	3.4	39	70	6008-414
VDD13-3.5	3.5	39	70	6008-415
VDD13-3.6	3.6	39	70	6008-416
VDD13-3.7	3.7	39	70	6008-417
VDD13-3.8	3.8	43	75	6008-418
VDD13-3.9	3.9	43	75	6008-419
VDD13-4.0	4.0	43	75	6008-420
VDD13-4.1	4.1	43	75	6008-421
VDD13-4.2	4.2	43	75	6008-422
VDD13-4.3	4.3	47	80	6008-423
VDD13-4.4	4.4	47	80	6008-424
VDD13-4.5	4.5	47	80	6008-425
VDD13-4.6	4.6	47	80	6008-426
VDD13-4.7	4.7	47	80	6008-427
VDD13-4.8	4.8	52	86	6008-428
VDD13-4.9	4.9	52	86	6008-429
VDD13-5.0	5.0	52	86	6008-430
VDD13-5.1	5.1	52	86	6008-431
VDD13-5.2	5.2	52	86	6008-432
VDD13-5.3	5.3	52	86	6008-433
VDD13-5.4	5.4	57	93	6008-434
VDD13-5.5	5.5	57	93	6008-435
VDD13-5.6	5.6	57	93	6008-436
VDD13-5.7	5.7	57	93	6008-437
VDD13-5.8	5.8	57	93	6008-438
VDD13-5.9	5.9	57	93	6008-439

Work Material / Velocity m/min

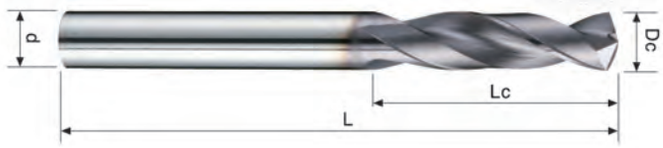
GR.1 Non alloyed steels Alloyed Steels	GR.6 Iron	GR.9 Copper	GR.10 Aluminium	GR.11 Plastics
50-80	70-100	100-180	100-250	80-200

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD13-6.0	6.0	57	93	6008-440
VDD13-6.1	6.1	63	101	6008-441
VDD13-6.2	6.2	63	101	6008-442
VDD13-6.3	6.3	63	101	6008-443
VDD13-6.4	6.4	63	101	6008-444
VDD13-6.5	6.5	63	101	6008-445
VDD13-6.6	6.6	63	101	6008-446
VDD13-6.7	6.7	63	101	6008-447
VDD13-6.8	6.8	69	109	6008-448
VDD13-6.9	6.9	69	109	6008-449
VDD13-7.0	7.0	69	109	6008-450
VDD13-7.1	7.1	69	109	6008-451
VDD13-7.2	7.2	69	109	6008-452
VDD13-7.3	7.3	69	109	6008-453
VDD13-7.4	7.4	69	109	6008-454
VDD13-7.5	7.5	69	109	6008-455
VDD13-7.6	7.6	75	117	6008-456
VDD13-7.7	7.7	75	117	6008-457
VDD13-7.8	7.8	75	117	6008-458
VDD13-7.9	7.9	75	117	6008-459
VDD13-8.0	8.0	75	117	6008-460
VDD13-8.1	8.1	75	117	6008-461
VDD13-8.2	8.2	75	117	6008-462
VDD13-8.3	8.3	75	117	6008-463
VDD13-8.4	8.4	75	117	6008-464
VDD13-8.5	8.5	75	117	6008-465
VDD13-8.6	8.6	81	125	6008-466
VDD13-8.7	8.7	81	125	6008-467
VDD13-8.8	8.8	81	125	6008-468
VDD13-8.9	8.9	81	125	6008-469
VDD13-9.0	9.0	81	125	6008-470
VDD13-9.1	9.1	81	125	6008-471
VDD13-9.2	9.2	81	125	6008-472
VDD13-9.3	9.3	81	125	6008-473
VDD13-9.4	9.4	81	125	6008-474
VDD13-9.5	9.5	81	125	6008-475
VDD13-9.6	9.6	87	133	6008-476
VDD13-9.7	9.7	87	133	6008-477
VDD13-9.8	9.8	87	133	6008-478
VDD13-9.9	9.9	87	133	6008-479
VDD13-10.0	10.0	87	133	6008-480
VDD13-10.2	10.2	87	133	6008-481
VDD13-10.5	10.5	87	133	6008-482
VDD13-11.0	11.0	94	142	6008-483
VDD13-11.5	11.5	94	142	6008-484
VDD13-12.0	12.0	101	151	6008-485
VDD13-13.0	13.0	101	151	6008-486

High Performance Drills

VERTEX®

MG Carbide | TiAlN F-NaNo | 3XD | 2 | 140° | DIN 6539 | Steels | Stainless | <48 HRC | 45-56 HRC | Iron | Titanium | Nickel



Straight Shank(Order No. VDD30-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD30-2.0	2.0	12	38	6008-500
VDD30-2.1	2.1	12	38	6008-501
VDD30-2.2	2.2	13	40	6008-502
VDD30-2.3	2.3	13	40	6008-503
VDD30-2.4	2.4	14	43	6008-504
VDD30-2.5	2.5	14	43	6008-505
VDD30-2.6	2.6	14	43	6008-506
VDD30-2.7	2.7	16	46	6008-507
VDD30-2.8	2.8	16	46	6008-508
VDD30-2.9	2.9	16	46	6008-509
VDD30-3.0	3.0	16	46	6008-510
VDD30-3.1	3.1	18	49	6008-511
VDD30-3.2	3.2	18	49	6008-512
VDD30-3.3	3.3	18	49	6008-513
VDD30-3.4	3.4	20	52	6008-514
VDD30-3.5	3.5	20	52	6008-515
VDD30-3.6	3.6	20	52	6008-516
VDD30-3.7	3.7	20	52	6008-517
VDD30-3.8	3.8	22	55	6008-518
VDD30-3.9	3.9	22	55	6008-519
VDD30-4.0	4.0	22	55	6008-520
VDD30-4.1	4.1	22	55	6008-521
VDD30-4.2	4.2	22	55	6008-522
VDD30-4.3	4.3	24	58	6008-523
VDD30-4.4	4.4	24	58	6008-524
VDD30-4.5	4.5	24	58	6008-525
VDD30-4.6	4.6	24	58	6008-526
VDD30-4.7	4.7	24	58	6008-527
VDD30-4.8	4.8	26	62	6008-528
VDD30-4.9	4.9	26	62	6008-529
VDD30-5.0	5.0	26	62	6008-530
VDD30-5.1	5.1	26	62	6008-531
VDD30-5.2	5.2	26	62	6008-532
VDD30-5.3	5.3	26	62	6008-533
VDD30-5.4	5.4	28	66	6008-534
VDD30-5.5	5.5	28	66	6008-535
VDD30-5.6	5.6	28	66	6008-536
VDD30-5.7	5.7	28	66	6008-537
VDD30-5.8	5.8	28	66	6008-538
VDD30-5.9	5.9	28	66	6008-539
VDD30-6.0	6.0	28	66	6008-540
VDD30-6.1	6.1	31	70	6008-541
VDD30-6.2	6.2	31	70	6008-542
VDD30-6.3	6.3	31	70	6008-543
VDD30-6.4	6.4	31	70	6008-544
VDD30-6.5	6.5	31	70	6008-545
VDD30-6.6	6.6	31	70	6008-546
VDD30-6.7	6.7	31	70	6008-547
VDD30-6.8	6.8	34	74	6008-548
VDD30-6.9	6.9	34	74	6008-549

Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron
70-100	30-50	20-30	10-20	90-130

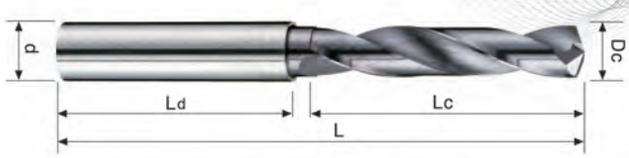
GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
25-45	20-45	130-230	130-300

ORDER NO.	Dc h7	Lc mm	L mm	CODE NO.
VDD30-7.0	7.0	34	74	6008-550
VDD30-7.1	7.1	34	74	6008-551
VDD30-7.2	7.2	34	74	6008-552
VDD30-7.3	7.3	34	74	6008-553
VDD30-7.4	7.4	34	74	6008-554
VDD30-7.5	7.5	34	74	6008-555
VDD30-7.6	7.6	37	79	6008-556
VDD30-7.7	7.7	37	79	6008-557
VDD30-7.8	7.8	37	79	6008-558
VDD30-7.9	7.9	37	79	6008-559
VDD30-8.0	8.0	37	79	6008-560
VDD30-8.1	8.1	37	79	6008-561
VDD30-8.2	8.2	37	79	6008-562
VDD30-8.3	8.3	37	79	6008-563
VDD30-8.4	8.4	37	79	6008-564
VDD30-8.5	8.5	37	79	6008-565
VDD30-8.6	8.6	40	84	6008-566
VDD30-8.7	8.7	40	84	6008-567
VDD30-8.8	8.8	40	84	6008-568
VDD30-8.9	8.9	40	84	6008-569
VDD30-9.0	9.0	40	84	6008-570
VDD30-9.1	9.1	40	84	6008-571
VDD30-9.2	9.2	40	84	6008-572
VDD30-9.3	9.3	40	84	6008-573
VDD30-9.4	9.4	40	84	6008-574
VDD30-9.5	9.5	40	84	6008-575
VDD30-9.6	9.6	43	89	6008-576
VDD30-9.7	9.7	43	89	6008-577
VDD30-9.8	9.8	43	89	6008-578
VDD30-9.9	9.9	43	89	6008-579
VDD30-10.0	10.0	43	89	6008-580
VDD30-10.2	10.2	43	89	6008-581
VDD30-10.5	10.5	43	89	6008-582
VDD30-10.8	10.8	47	95	6008-583
VDD30-11.0	11.0	47	95	6008-584
VDD30-11.5	11.5	47	95	6008-585
VDD30-12.0	12.0	51	102	6008-586
VDD30-12.5	12.5	51	102	6008-587
VDD30-13.0	13.0	51	102	6008-588

High Performance Drills

VERTEX

UMG Carbide | TiAlN F-TOP | 3XD | 2 | 140° | DIN 6537K | Steels | Stainless | <48 HRC | 45-56 HRC | Iron | Titanium | Nickel



Stud Length(Order No. VDD31-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD31-3.0	3.0	20	62	6	36	6008-600
VDD31-3.1	3.1	20	62	6	36	6008-601
VDD31-3.2	3.2	20	62	6	36	6008-602
VDD31-3.3	3.3	20	62	6	36	6008-603
VDD31-3.4	3.4	20	62	6	36	6008-604
VDD31-3.5	3.5	20	62	6	36	6008-605
VDD31-3.6	3.6	20	62	6	36	6008-606
VDD31-3.7	3.7	20	62	6	36	6008-607
VDD31-3.8	3.8	24	66	6	36	6008-608
VDD31-3.9	3.9	24	66	6	36	6008-609
VDD31-4.0	4.0	24	66	6	36	6008-610
VDD31-4.1	4.1	24	66	6	36	6008-611
VDD31-4.2	4.2	24	66	6	36	6008-612
VDD31-4.3	4.3	24	66	6	36	6008-613
VDD31-4.4	4.4	24	66	6	36	6008-614
VDD31-4.5	4.5	24	66	6	36	6008-615
VDD31-4.6	4.6	24	66	6	36	6008-616
VDD31-4.7	4.7	24	66	6	36	6008-617
VDD31-4.8	4.8	28	66	6	36	6008-618
VDD31-4.9	4.9	28	66	6	36	6008-619
VDD31-5.0	5.0	28	66	6	36	6008-620
VDD31-5.1	5.1	28	66	6	36	6008-621
VDD31-5.2	5.2	28	66	6	36	6008-622
VDD31-5.3	5.3	28	66	6	36	6008-623
VDD31-5.4	5.4	28	66	6	36	6008-624
VDD31-5.5	5.5	28	66	6	36	6008-625
VDD31-5.6	5.6	28	66	6	36	6008-626
VDD31-5.7	5.7	28	66	6	36	6008-627
VDD31-5.8	5.8	28	66	6	36	6008-628
VDD31-5.9	5.9	28	66	6	36	6008-629
VDD31-6.0	6.0	28	66	6	36	6008-630
VDD31-6.1	6.1	34	79	8	36	6008-631
VDD31-6.2	6.2	34	79	8	36	6008-632
VDD31-6.3	6.3	34	79	8	36	6008-633
VDD31-6.4	6.4	34	79	8	36	6008-634
VDD31-6.5	6.5	34	79	8	36	6008-635
VDD31-6.6	6.6	34	79	8	36	6008-636
VDD31-6.7	6.7	34	79	8	36	6008-637
VDD31-6.8	6.8	34	79	8	36	6008-638
VDD31-6.9	6.9	34	79	8	36	6008-639
VDD31-7.0	7.0	34	79	8	36	6008-640
VDD31-7.1	7.1	41	79	8	36	6008-641
VDD31-7.2	7.2	41	79	8	36	6008-642
VDD31-7.3	7.3	41	79	8	36	6008-643
VDD31-7.4	7.4	41	79	8	36	6008-644
VDD31-7.5	7.5	41	79	8	36	6008-645
VDD31-7.6	7.6	41	79	8	36	6008-646
VDD31-7.7	7.7	41	79	8	36	6008-647
VDD31-7.8	7.8	41	79	8	36	6008-648
VDD31-7.9	7.9	41	79	8	36	6008-649

Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron
80-180	45-60	40-60	15-35	90-130

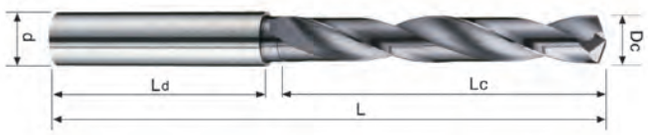
GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
35-45	30-45	130-230	130-300

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD31-8.0	8.0	41	79	8	36	6008-650
VDD31-8.1	8.1	47	89	10	40	6008-651
VDD31-8.2	8.2	47	89	10	40	6008-652
VDD31-8.3	8.3	47	89	10	40	6008-653
VDD31-8.4	8.4	47	89	10	40	6008-654
VDD31-8.5	8.5	47	89	10	40	6008-655
VDD31-8.6	8.6	47	89	10	40	6008-656
VDD31-8.7	8.7	47	89	10	40	6008-657
VDD31-8.8	8.8	47	89	10	40	6008-658
VDD31-8.9	8.9	47	89	10	40	6008-659
VDD31-9.0	9.0	47	89	10	40	6008-660
VDD31-9.1	9.1	47	89	10	40	6008-661
VDD31-9.2	9.2	47	89	10	40	6008-662
VDD31-9.3	9.3	47	89	10	40	6008-663
VDD31-9.4	9.4	47	89	10	40	6008-664
VDD31-9.5	9.5	47	89	10	40	6008-665
VDD31-9.6	9.6	47	89	10	40	6008-666
VDD31-9.7	9.7	47	89	10	40	6008-667
VDD31-9.8	9.8	47	89	10	40	6008-668
VDD31-9.9	9.9	47	89	10	40	6008-669
VDD31-10.0	10.0	47	89	10	40	6008-670
VDD31-10.2	10.2	55	102	12	45	6008-671
VDD31-10.5	10.5	55	102	12	45	6008-672
VDD31-10.8	10.8	55	102	12	45	6008-673
VDD31-11.0	11.0	55	102	12	45	6008-674
VDD31-11.5	11.5	55	102	12	45	6008-675
VDD31-12.0	12.0	55	102	12	45	6008-676
VDD31-12.5	12.5	60	107	14	45	6008-677
VDD31-13.0	13.0	60	107	14	45	6008-678
VDD31-13.5	13.5	60	107	14	45	6008-679
VDD31-14.0	14.0	60	107	14	45	6008-680
VDD31-14.5	14.5	65	115	16	48	6008-681
VDD31-15.0	15.0	65	115	16	48	6008-682
VDD31-15.5	15.5	65	115	16	48	6008-683
VDD31-16.0	16.0	65	115	16	48	6008-684
VDD31-16.5	16.5	73	123	18	48	6008-685
VDD31-17.0	17.0	73	123	18	48	6008-686
VDD31-17.5	17.5	73	123	18	48	6008-687
VDD31-18.0	18.0	73	123	18	48	6008-688
VDD31-18.5	18.5	79	131	20	50	6008-689
VDD31-19.0	19.0	79	131	20	50	6008-690
VDD31-19.5	19.5	79	131	20	50	6008-691
VDD31-20.0	20.0	79	131	20	50	6008-692

High Performance Drills

VERTEX®

UMG Carbide | TiAlN F-TOP | 5XD | 2 | 140° | DIN 6537L | Steels | Stainless | <48 HRC | 45-56 HRC | Iron | Titanium | Nickel



Standard Length(Order No. VDD32-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD32-3.0	3.0	28	66	6	36	6008-700
VDD32-3.1	3.1	28	66	6	36	6008-701
VDD32-3.2	3.2	28	66	6	36	6008-702
VDD32-3.3	3.3	28	66	6	36	6008-703
VDD32-3.4	3.4	28	66	6	36	6008-704
VDD32-3.5	3.5	28	66	6	36	6008-705
VDD32-3.6	3.6	28	66	6	36	6008-706
VDD32-3.7	3.7	28	66	6	36	6008-707
VDD32-3.8	3.8	36	74	6	36	6008-708
VDD32-3.9	3.9	36	74	6	36	6008-709
VDD32-4.0	4.0	36	74	6	36	6008-710
VDD32-4.1	4.1	36	74	6	36	6008-711
VDD32-4.2	4.2	36	74	6	36	6008-712
VDD32-4.3	4.3	36	74	6	36	6008-713
VDD32-4.4	4.4	36	74	6	36	6008-714
VDD32-4.5	4.5	36	74	6	36	6008-715
VDD32-4.6	4.6	36	74	6	36	6008-716
VDD32-4.7	4.7	36	74	6	36	6008-717
VDD32-4.8	4.8	44	82	6	36	6008-718
VDD32-4.9	4.9	44	82	6	36	6008-719
VDD32-5.0	5.0	44	82	6	36	6008-720
VDD32-5.1	5.1	44	82	6	36	6008-721
VDD32-5.2	5.2	44	82	6	36	6008-722
VDD32-5.3	5.3	44	82	6	36	6008-723
VDD32-5.4	5.4	44	82	6	36	6008-724
VDD32-5.5	5.5	44	82	6	36	6008-725
VDD32-5.6	5.6	44	82	6	36	6008-726
VDD32-5.7	5.7	44	82	6	36	6008-727
VDD32-5.8	5.8	44	82	6	36	6008-728
VDD32-5.9	5.9	44	82	6	36	6008-729
VDD32-6.0	6.0	44	82	6	36	6008-730
VDD32-6.1	6.1	53	91	8	36	6008-731
VDD32-6.2	6.2	53	91	8	36	6008-732
VDD32-6.3	6.3	53	91	8	36	6008-733
VDD31-6.4	6.4	53	91	8	36	6008-734
VDD32-6.5	6.5	53	91	8	36	6008-735
VDD32-6.6	6.6	53	91	8	36	6008-736
VDD32-6.7	6.7	53	91	8	36	6008-737
VDD32-6.8	6.8	53	91	8	36	6008-738
VDD32-6.9	6.9	53	91	8	36	6008-739
VDD32-7.0	7.0	53	91	8	36	6008-740
VDD32-7.1	7.1	53	91	8	36	6008-741
VDD32-7.2	7.2	53	91	8	36	6008-742
VDD32-7.3	7.3	53	91	8	36	6008-743
VDD32-7.4	7.4	53	91	8	36	6008-744
VDD32-7.5	7.5	53	91	8	36	6008-745
VDD32-7.6	7.6	53	91	8	36	6008-746
VDD32-7.7	7.7	53	91	8	36	6008-747
VDD32-7.8	7.8	53	91	8	36	6008-748
VDD32-7.9	7.9	53	91	8	36	6008-749

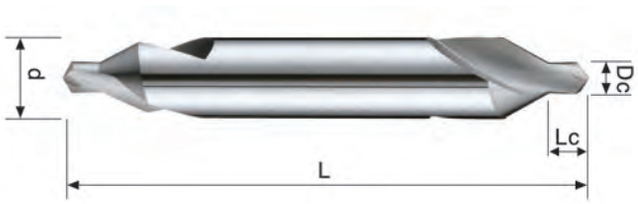
Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron
80-180	45-60	40-60	15-35	90-130

GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
35-45	30-45	130-230	130-300

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Ld mm	CODE NO.
VDD32-8.0	8.0	53	91	8	36	6008-750
VDD32-8.1	8.1	61	103	10	40	6008-751
VDD32-8.2	8.2	61	103	10	40	6008-752
VDD32-8.3	8.3	61	103	10	40	6008-753
VDD32-8.4	8.4	61	103	10	40	6008-754
VDD32-8.5	8.5	61	103	10	40	6008-755
VDD32-8.6	8.6	61	103	10	40	6008-756
VDD32-8.7	8.7	61	103	10	40	6008-757
VDD32-8.8	8.8	61	103	10	40	6008-758
VDD32-8.9	8.9	61	103	10	40	6008-759
VDD32-9.0	9.0	61	103	10	40	6008-760
VDD32-9.1	9.1	61	103	10	40	6008-761
VDD32-9.2	9.2	61	103	10	40	6008-762
VDD32-9.3	9.3	61	103	10	40	6008-763
VDD32-9.4	9.4	61	103	10	40	6008-764
VDD32-9.5	9.5	61	103	10	40	6008-765
VDD32-9.6	9.6	61	103	10	40	6008-766
VDD32-9.7	9.7	61	103	10	40	6008-767
VDD32-9.8	9.8	61	103	10	40	6008-768
VDD32-9.9	9.9	61	103	10	40	6008-769
VDD32-10.0	10.0	61	103	10	40	6008-770
VDD32-10.2	10.2	71	118	12	45	6008-771
VDD32-10.5	10.5	71	118	12	45	6008-772
VDD32-10.8	10.8	71	118	12	45	6008-773
VDD32-11.0	11.0	71	118	12	45	6008-774
VDD32-11.5	11.5	71	118	12	45	6008-775
VDD32-12.0	12.0	71	118	12	45	6008-776
VDD32-12.5	12.5	77	124	14	45	6008-777
VDD32-13.0	13.0	77	124	14	45	6008-778
VDD32-13.5	13.5	77	124	14	45	6008-779
VDD32-14.0	14.0	77	124	14	45	6008-780
VDD32-14.5	14.5	83	133	16	48	6008-781
VDD32-15.0	15.0	83	133	16	48	6008-782
VDD32-15.5	15.5	83	133	16	48	6008-783
VDD32-16.0	16.0	83	133	16	48	6008-784
VDD32-16.5	16.5	93	143	18	48	6008-785
VDD32-17.0	17.0	93	143	18	48	6008-786
VDD32-17.5	17.5	93	143	18	48	6008-787
VDD32-18.0	18.0	93	143	18	48	6008-788
VDD32-18.5	18.5	101	153	20	50	6008-789
VDD32-19.0	19.0	101	153	20	50	6008-790
VDD32-19.5	19.5	101	153	20	50	6008-791
VDD32-20.0	20.0	101	153	20	50	6008-792

Combined Drill And Countersink



Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron
30-80	20-60	15-25	10-20	40-100

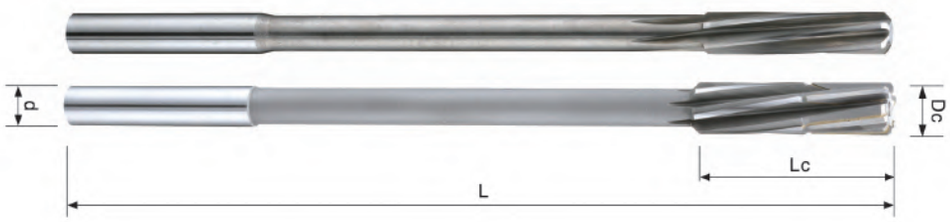
GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
20-40	15-40	60-300	80-400

Standard Length(Order No. VDT08-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	CODE NO.
VDT08-0.50	0.50	0.8	38	3	6008-800
VDT08-0.80	0.80	1.1	38	3	6008-801
VDT08-1.00	1.00	1.3	38	3	6008-802
VDT08-1.25	1.25	1.6	38	3	6008-803
VDT08-1.60	1.60	2.0	38	4	6008-804
VDT08-2.00	2.00	2.5	50	5	6008-805
VDT08-2.50	2.50	3.1	50	6	6008-806
VDT08-3.15	3.15	3.9	63	8	6008-807
VDT08-4.00	4.00	5.0	66	10	6008-808
VDT08-5.00	5.00	6.3	73	12	6008-809

Machine Reamers Long Length



Work Material / Velocity m/min

GR.1 Non alloyed steels Alloyed Steels	GR.2 Heat resistant steels Stainless steels	GR.3 Hardened steels < 48 HRC	GR.4 Hardened steels 48-56 HRC	GR.6 Iron	GR.7 Titanium	GR.8 Nickel	GR.9 Copper	GR.10 Aluminium
7-25	7-15	5-10	5-10	10-22	10-25	5-20	30-45	20-50

Straight Shank(Order No. VRC02-Dia)

Unit:mm

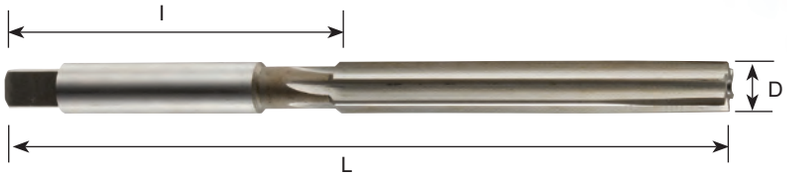
ORDER NO.	Dc h7	Lc mm	L mm	d h6	Z teeth	CODE NO.
VRC02-3.0	3.0	15	100	3.0	4	6008-820
VRC02-3.5	3.5	18	112	3.5	4	6008-821
VRC02-4.0	4.0	19	119	4.0	4	6008-822
VRC02-4.5	4.5	21	126	4.5	4	6008-823
VRC02-5.0	5.0	23	132	5.0	6	6008-824
VRC02-6.0	6.0	26	139	6.0	6	6008-825
VRC02-7.0	7.0	31	156	7.0	6	6008-826
VRC02-8.0	8.0	33	165	8.0	6	6008-827

Straight Shank(Order No. VRC02-Dia)

Unit:mm

ORDER NO.	Dc h7	Lc mm	L mm	d h6	Z teeth	CODE NO.
VRC02-9.0	9.0	36	175	9.0	6	6008-828
VRC02-10.0	10.0	38	184	10.0	6	6008-829
VRC02-12.0	12.0	44	205	10.0	6	6008-830
VRC02-14.0	14.0	47	214	12.5	6	6008-831
VRC02-16.0	16.0	52	227	12.5	6	6008-832
VRC02-18.0	18.0	56	241	14.0	6	6008-833
VRC02-20.0	20.0	60	254	16.0	6	6008-834

Hand Reamers - HSS

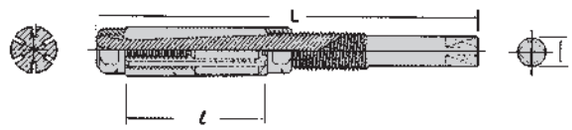


H.S.S.

ORDER NO.	BLADE D	Total Length L	BLADE l	BLADE N	CODE NO.
VHM-03	3	72	40	6	6009-001
VHM-04	4	80	40	6	6009-002
VHM-05	5	90	45	6	6009-003
VHM-06	6	100	50	6	6009-004
VHM-07	7	105	55	6	6009-005
VHM-08	8	115	60	6	6009-006
VHM-09	9	125	65	6	6009-007
VHM-10	10	130	70	6	6009-008
VHM-11	11	140	75	6	6009-009
VHM-12	12	150	75	6	6009-010

Adjustable Reamers

Unique Quality, World Standard



Features Adjustable Reamers

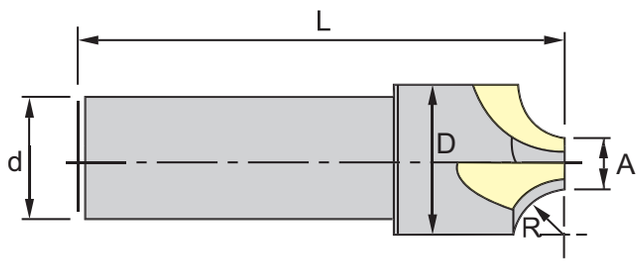
- Because of you can get diameter adjust, one Adjustable reamers function possible as dozens of solid reamers.
- The spare blades save you a lot of economization

ORDER NO.	Range of Adjustment (mm)	Overall Length (mm)	Blade Length (mm)	Weight (kgs)	CODE NO.
VAR-635	6.35~7.15	83	35	0.013	6009-021
VAR-715	7.15~7.95	91	35	0.017	6009-022
VAR-795	7.95~8.70	107	38	0.026	6009-023
VAR-870	8.70~9.50	112	38	0.030	6009-024
VAR-950	9.50~10.25	121	38	0.037	6009-025
VAR-1025	10.25~11	127	38	0.045	6009-026
VAR-1100	11~12	134	42	0.059	6009-027
VAR-1200	12~13.5	141	42	0.071	6009-028
VAR-1350	13.5~15	146	45	0.090	6009-029
VAR-1500	15~16.75	166	53	0.129	6009-030
VAR-1675	16.75~18.25	172	56	0.172	6009-031
VAR-1825	18.25~19.75	178	64	0.227	6009-032
VAR-1975	19.75~21.50	188	67	0.292	6009-033
VAR-2150	21.50~23.75	204	76	0.393	6009-034
VAR-2375	23.75~27	230	83	0.525	6009-035
VAR-2700	27~30.25	254	86	0.785	6009-036
VAR-3025	30.25~34.25	280	98	0.945	6009-037
VAR-3425	34.25~38	305	109	1.36	6009-038
VAR-3800	38~46	356	113	2.11	6009-039
VAR-4600	46~56	407	128	3.60	6009-040
VAR-5600	56~70	457	124	6.14	6009-041
VAR-7000	70~85	509	135	9.87	6009-042

Outside Radius Shape End Mills

MATERIAL: H.S.S.

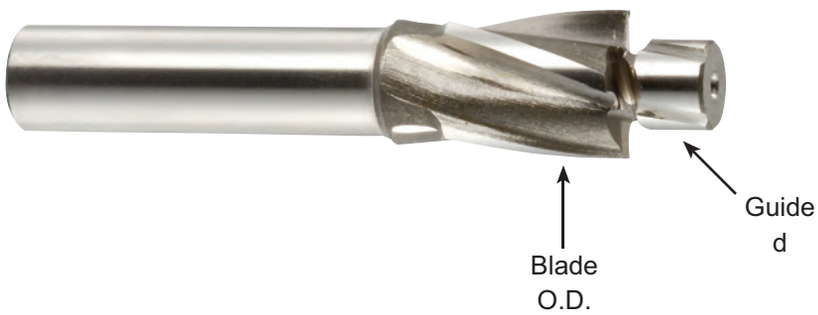
Suit For:
Plastic molds and cutting radius shape work piece.



ORDER NO.	R	End D. A	O.D.	Total L	Shank d	Blade No. N	CODE NO.
VCR-010	1	6	8	55	10	3	6009-061
VCR-020	2	6	10	60	12	3	6009-062
VCR-030	3	6	12	60	12	3	6009-063
VCR-040	4	6	14	65	12	3	6009-064
VCR-050	5	7	17	70	16	4	6009-065
VCR-060	6	8	20	75	16	4	6009-066
VCR-070	7	8	22	75	16	4	6009-067
VCR-080	8	9	25	85	20	4	6009-068
VCR-090	9	9	27	85	20	4	6009-069
VCR-100	10	10	30	95	25	4	6009-070

Counterbore End Mills

MATERIAL: H.S.S.



ORDER NO.	Dimension mm	Guide d	Blade O.D.	Shank D	CODE NO.
VCB-03	3	3.2	5.9	6	6009-081
VCB-04	4	4.2	7.4	6	6009-082
VCB-05	5	5.2	8.9	6	6009-083
VCB-06	6	6.2	10.4	8	6009-084
VCB-08	8	8.2	13.4	10	6009-085
VCB-10	10	10.3	16.8	12	6009-086
VCB-12	12	12.3	18.8	12	6009-087
VCB-14	14	14.3	24	12	6009-088
VCB-16	16	16.3	26	12	6009-089
VCB-18	18	18.3	28	12	6009-090

Metal Slitting Saws

MATERAL: SKH-9

INSIDE DIA. 1″ (25.4mm)

ORDER NO.	Thickness	ØO.D.	CODE NO.
VSS-7505	0.5 m/m	75	6009-131
VSS-7508	0.8 m/m	75	6009-132
VSS-7510	1.0 m/m	75	6009-133
VSS-7512	1.2 m/m	75	6009-134
VSS-7515	1.5 m/m	75	6009-135
VSS-7518	1.8 m/m	75	6009-136
VSS-7520	2.0 m/m	75	6009-137

ORDER NO.	Thickness	ØO.D.	CODE NO.
VSS-1005	0.5 m/m	100	6009-151
VSS-1008	0.8 m/m	100	6009-152
VSS-1010	1.0 m/m	100	6009-153
VSS-1012	1.2 m/m	100	6009-154
VSS-1015	1.5 m/m	100	6009-155
VSS-1018	1.8 m/m	100	6009-156
VSS-1020	2.0 m/m	100	6009-157

Responsibility

ACCURACY

/

SPEED

/

RESPONSIBILITY

/

COOPERATIVE

G1	SHOCK ABSORBER
G2	ARBOR PRESSER SAWBELT WELDING MACHINE
G2	FLAT END MOVABLE HANDLE ELLIPSE MOVABLE HANDLE
G3	BALL KNOBS / HAND KNOBS REVOLVING HANDLES
G3	ADJUSTABLE HAND LEVERS
G4	BALL CRANK HANDLES 360º SWIVELLING LOCK HANDLE PU-HAMMER SERIES
G5	GRINDER MACHINE SERIES HORIZONTAL BAND SAWS
G6	MULTI-PURPOSE MILLING & DRILLING MACHINE
G7	ALL GEARED HEAD DRILL PRESS
G8	VERTICAL BAND SAWING MACHINE
G9~G12	AIR DIE TOOL
G13~G14	MAGNETIC DE-BURRING & POLISHING MACHINE
G15~G16	PRECISION DRILL GRINDER
G17	LEFT HAND DRILL GRINDER
G18	SHEET METAL DRILL GRINDER
G19~G22	PRECISION END MILL GRINDER
G23	WEIGHT SCALES
G24	QUICK LONG DISTANCE CLAMPING VISE

SMALL TYPE MACHINE

Shock Absorber

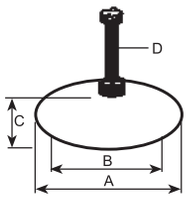
Special Features

Preventing shock & reducing noise. low bed design.
Easy installation. Simple adjustment. High durability.

Application

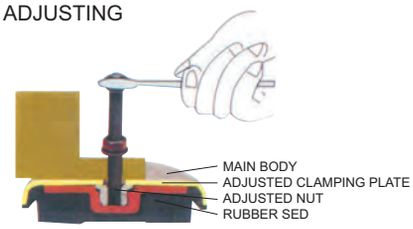
Various general working machines, metal work piece processing machine, production machine, special machine, measuring equipment, testing machine.
Electrical generator, air compressor, etc.
ADJUSTABLE RANGE 6-12 mm

DELUXE TYPE



DELUXE TYPE

ADJUSTING

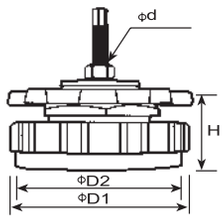


Unit:mm

ORDER NO.	A	B	C	Ø DxL	LOAD KGS	WEIGHT KGS	CODE NO.
TK-90	90	50	32	12M-100	500kg	0.8	7001-000
TK-120	120	90	35	12M-100	1000kg	1.4	7001-001
TK-160	160	130	38	16M-110	1500kg	2.8	7001-002
TK-200	200	170	45	20M-120	3500kg	4.4	7001-003

Features : Easy to operate. shock-absorbent, reduces machine noise includes adjustment, and assures prodution accuracy.

STANDARD TYPE

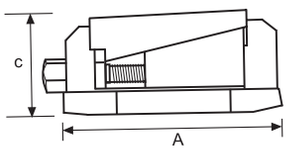


Unit:mm

ORDER NO.	D1	D2	H	Ø dxL	LOAD KGS	Adjustment HEIGH	N.W. KGS	CODE NO.
SB-4	100	90	60	12x50	500	25	2	7001-031
SB-6	150	135	95	16x110	1000	40	5	7001-032
SB-8	200	180	100	20x120	2500	40	8	7001-033
SB-10	250	230	125	24x180	4000	40	12	7001-034

SUITABLE FOR : machine tools, molding machine, printing machine, CNC lathe, grinding machines, drilling machines, milling machines.

HEAVY DUTY TYPE

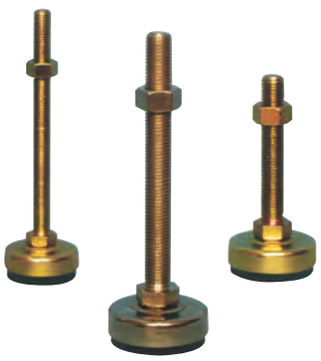


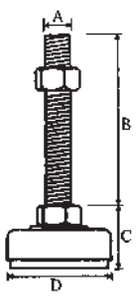
Unit:mm

ORDER NO.	A	B	C	LOAD KGS	Adjustment HEIGH	N.W. KGS	CODE NO.
SC-1	130	96	66	700	4MM	4	7001-060
SC-2	174	143	80	1500	5MM	8.8	7001-061
SC-3	217	165	101	2500	6MM	16	7001-062

SUITABLE FOR : CNC lathe, milling machines, cutting machines, grinding machines.

LIGHT DUTY TYPE





Unit:mm

ORDER NO.	A	B	C	D	LOAD KGS	CODE NO.
SY-8	M8X1.25P	50	20	40	100	7001-080
SY-12	M12X1.25P	75	30	50	200	7001-081
SY-16	M16X2.0P	100	35	60	300	7001-082

Arbor Press

STANDARD TYPE

All main parts made of dutile cast iron.
Adjustable handle gives convenient handle postioning.
Ram finite control by smooth gears.
4-90 degree equally divided slotted round table.

ORDER NO.	OVERALL HEIGHT	STORKE (mm)	BASE	CENTER TO KNEE	ARBOR PUNCH □	WEIGHT (kgs)	CODE NO.
VAR-0	254mm(10″)	114	102x240mm	85	19x19x190	8.2	7002-100
VAR-1	304mm(12″)	133	127x270mm	95	25x25x228	12.6	7002-101
VAR-2	432mm(17″)	215	165x410mm	130	32x32x335	28	7002-102
VAR-3	546mm(21″)	317	200x460mm	135	38x38x456	45.3	7002-103
VAR-5	820mm(34″)	460	250x670mm	245	45x45x670	140	7002-104

RATCHET LEVERS TYPE

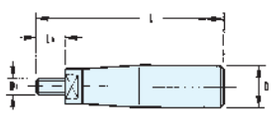
This arbor press with all standard's feature. But operated with a ratchet device that will permit you to use the lever in the most convenient position, the lever has a counterweight for quick return after which the down stroke handwheel will advance the ram to the work quickly.
Ratchet Type Arbor Press available-No. 3/5 only.
The size is same as VAR-3, 5

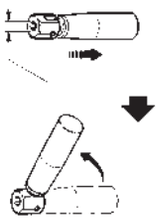
ORDER NO.	VARR-3	VARR-5
G.W. KGS	65	162
CODE NO.	7002-131	7002-132

Flat End Movable Handle

NEW

E F





Flat End Movable Handle

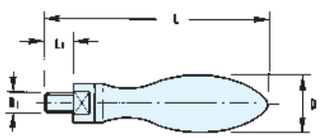
- Handle is foggy plating treated.
- Detachable nut is blackened.
- Fit to common movable handwheel.
- Ready to use.
- Good handing.

ORDER NO.	D_1	D	L_1	L	CODE NO.
VFE-10	10x1.5	23	16	100	7003-001
VFE-83	3/8x16	22	16	99	7003-002
VFE-8	8x1.25	19	16	93	7003-003
VFE-165	5/16x18	19	10	78	7003-004
VFE-41	1/4x20	16	11	63	7003-005

Ellipse Movable Handle

NEW

M E

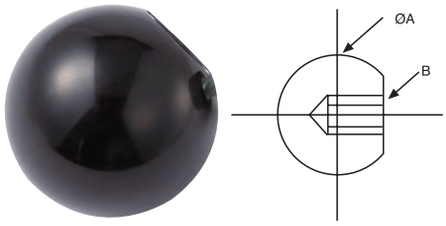


Ellipse Movable Handle

- Brilliant or foggy plating surface.
- Fit to common movable handwheel.
- Easy to install
- Shine and good looking.

ORDER NO.	D_1	D	L_1	L	CODE NO.
VEM-12	12x1.75	31	15	122	7003-006
VEM-10	10x1.5	26	13	110	7003-007
VEM-83	3/8x16	25	13	99	7003-008
VEM-8	8x1.25	20	9	80	7003-009
VEM-6	6x1.0	16	7	60	7003-010

Ball Knobs



Name	Material	Surfaced process
Knob	Bakelite (KU)	Black

mm

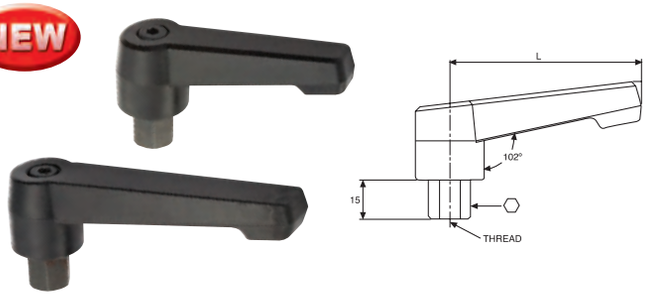
ORDER NO. (KU)	A	B	CODE NO.
VKB-6A	25	M6	7003-120
VKB-8	25	M8	7003-121
VKB-8B	38	M8	7003-123
VKB-10	38	M10	7003-124
VKB-12A	38	M12	7003-127
VKB-12B	42	M12	7003-128

Hand Knobs

Name	Material	Surfaced process
Knob	(KT)	Black
Spindle	Steel (ST)	Zincing (ZI)

ORDER NO. (KT)	THREAD	KNOB	CODE NO.
VKB-8K	M8x21L	Ø40x65L	7003-133
VKB-8KL	M8x63L	Ø40x65L	7003-134A

Adjustable Hand Levers

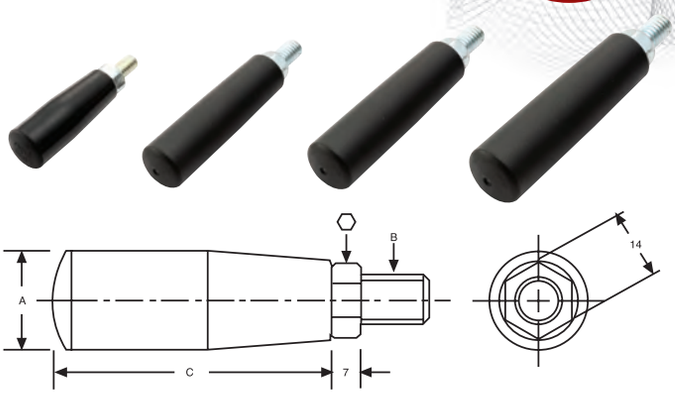


Name	Material	Surfaced process
Handle	Plastic (KT)	Black (BK) and black handle (OB)
Spindle	Steel (ST)	

mm

ORDER NO. (KT)	HANDLE L	THREAD	⬡	CODE NO.
VAH-6	42	M6	14	7003-214A
VAH-6L	72	M6	14	7003-215A
VAH-8	72	M8	14	7003-216A
VAH-10	92	M10	16	7003-217A
VAH-12	112	M12	16	7003-218A

Revolving Handles

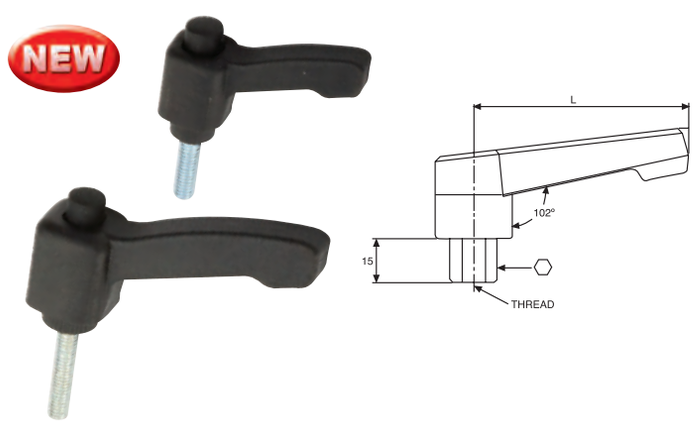


Name	Material	Surfaced process
Handle	Bakelite (KU)	Black
Spindle	Steel (ST)	Zincing (ZI)

mm

ORDER NO.	A	B	C	THREAD L	⬡	CODE NO.
VRL-8H	20	M8	56	13	14	7003-283A
VRL-8HA	22	M8	76	13	14	7003-284A
VRL-10H	20	M10	56	13	14	7003-285A
VRL-10HA	22	M10	76	13	14	7003-287A
VRL-10HB	25	M10	83	13	14	7003-288A

Adjustable Hand Levers

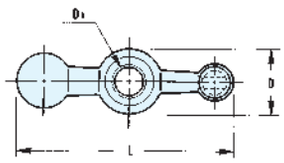


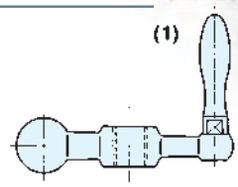
Name	Material	Surfaced process
Handle	(KT)	Black Knob
Spindle	Steel (ST)	

mm

ORDER NO. (KT)	THREAD L	HANDLE L	CODE NO.
VAH-620	M6x20L	43	7003-220A
VAH-630	M6x30L	43	7003-220B
VAH-640	M6x45L	43	7003-220C
VAH-650	M6x20L	63	7003-220D
VAH-6XL	M6x30L	63	7003-220E
VAH-8D	M8x30L	63	7003-222A
VAH-815	M8x15L	83	7003-222B
VAH-820	M8x20L	83	7003-222C
VAH-840	M8x40L	83	7003-222D
VAH-1020	M10x20L	83	7003-223A

Ball Crank Handle



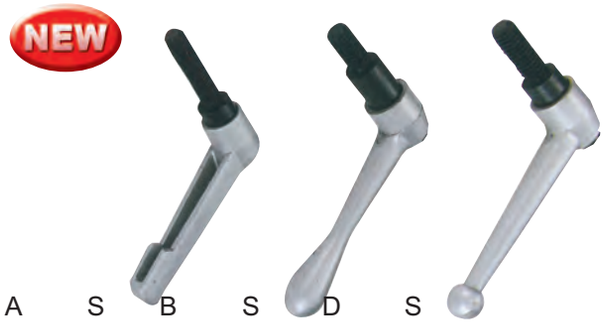


Ball Crank Handle

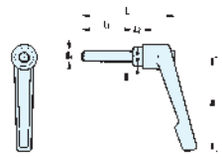
- Two types of handle end flat or ellipse, for choice.
- Brilliant or foggy plating surface.
- Center hole may be customer specified.

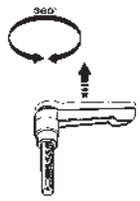
ORDER NO.	D_1	D	L	CODE NO.
VBK-39	Customer specified	39	190	7003-295
VBK-38		38	128	7003-296
VBK-30		30	95	7003-297
VBK-22		22	88	7003-298
VBK-19		19	79	7003-299

360º Swivelling Lock Handle



A S B S D S



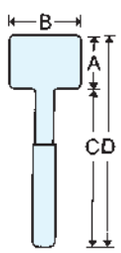


360º Swivel Handle

- When pull out, this handle can swivel 360º free.
- Aluminium handle, all water resistance.
- The handle shape features.
  curve, ball, square 3 types.

ORDER NO.	D1	D	L1	L2	L	H	CODE NO.
VSA-1	Customer specified	19	Customer specified	Customer specified	55~58	95	7003-300
VSA-2		10			55~58	96	7003-301
VSA-3		10			55~58	45	7003-302
VSB-1		19			55~58	110	7003-303
VSB-2		16			55~58	70	7003-304
VSB-3		10			55~58	50	7003-305
VSD-1		19			55~58	105	7003-306
VSD-2		16			55~58	65	7003-307
VSD-3		10			55~58	45	7003-308

PU-Hammer Series



BASIC: Steel structure and include steel shot.
MATERIALS: Main of the anti-pollution PU-liquid.
The holder use soft quality TPR.
FEATURE: PU hammer have many colors to choice. PU not make with heavy-metal and dioxin when burning.
HARDNESS: Hardness of hammer (90A~95A)

mm

ORDER NO.	A	B	C	D	Weight (g)	OZ	CODE NO.
VHM-38	38	100	249	287	490	18oz	7003-367
VHM-46	46	100	260	306	690	24oz	7003-368
VHM-50	50	110	290	340	930	33oz	7003-369
VHM-56	56	120	297	353	1160	41oz	7003-370
VHM-60	60	130	308	368	1370	49oz	7003-371

Universal Drill & Cutter Grinder

ORDER NO.VDG-32N CODE NO.8001-010

Double cams: The cam of grinding drills & The cam of grinding taps.

FEATURES

- Grinding capacity: Ø1.5~Ø32mm (Straight shank & taper shank) double wheels. It only need to rotate the motor when want to grind the tool of different material. It can increase the safety & save the time for changing & repairing the grinding wheel.
- The kinds of grinding tool include: drills, step drills, taps, lips of end mills, round bars, etc.
- Adopts precision 4″ 6 pawl self-centering chuck, clipping one time. It can grind the blade of drills and do the paring of drills abdomen. The angle of drills both sides and the length of the blade are the same after grinding. It can keep the accuracy of the center of drills without off center.

Longitudinal travel of table	120mm
Cross travel of saddle	135mm
Rotary angle of wheel head	360º
Point angle	90º-180º
Size of wheel	125x50x31.75mm
Speed of wheel	3600 RPM
Motor	3/4HP, 110V/220V/380V
N.W. / G.W.	90kgs/120kgs
Size of packing (LxWxH)	800x550x670mm

Horizontal Band Saws

ORDER NO.HBS-7 CODE NO.8001-030

Please notify the voltage & phase when you ordering.

SPECIFICATION

Capacity	●180mm (7″) ▬180x300mm (7″x12″)
Blade size	19x0.9x2360mm (3/4″x0.32x7'9″)
Motor	1HP 4pole 50HZ/1430rpm; 60HZ/1720rpm
Blade speed	22, 33, 45, 65mpm (86-132-178-260fpm)
Machine dim	L1470xW430mm (L58″xW17″) H990mm (39″) horizontal position.
N.W.	130kgs (286LBS)
G.W.	150kgs (341LBS)

Horizontal Band Saws

ORDER NO.HBS-7CE CODE NO.8001-030CE

SPECIFICATION

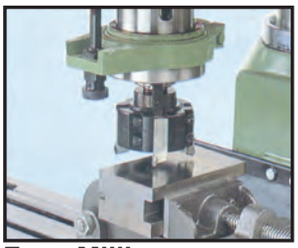
Capacity	90º ●180mm ▬180x280mm ▬65x300mm 45º ●110mm ▌180x110mm
Blade size	19x0.9x2360mm
Motor	1HP 4pole 50HZ/1430rpm; 60HZ/1720rpm
Blade speed	Step pulley 22, 33, 45, 65mpm
Packing Measurement	1295x457x1028mm
N.W. / G.W.	130kgs/150kgs
Type	"CE" Standard

Multi-Purpose Milling & Drilling Machine

ORDER NO.	CODE NO.
MD-30N	8001-020
MD-30B	8001-021

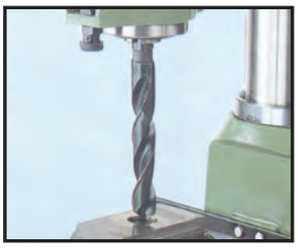
QUALITY FEATURES

- Milling, drilling, tapping boring, reamming.
- Head swivels 360º.
- Zero setting dials.
- Fine downfeed - calibrated.
- Heavy-duty tappered roller bearing spindle.
- 12 speeds.
- Positive spindle lock.
- Adjustable gibs on table.
- Adjustable stops on table.

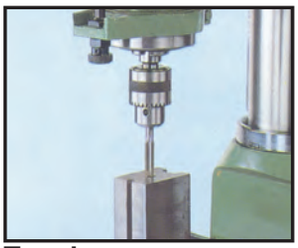


Face Milling

End Milling



1″ Drilling



Tapping

PLEASE NOTIFY THE VOLTAGE & PHASE, WHEN YOU ORDERING.

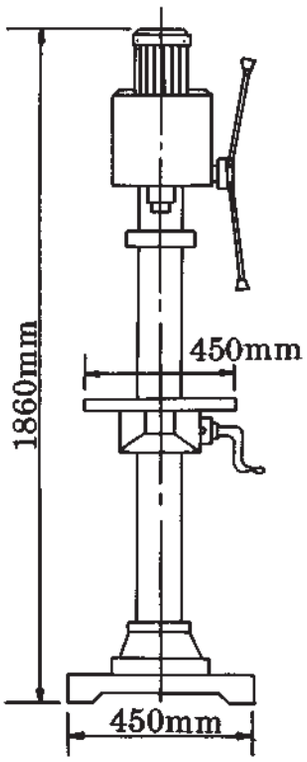
- Table slot is 16m/m

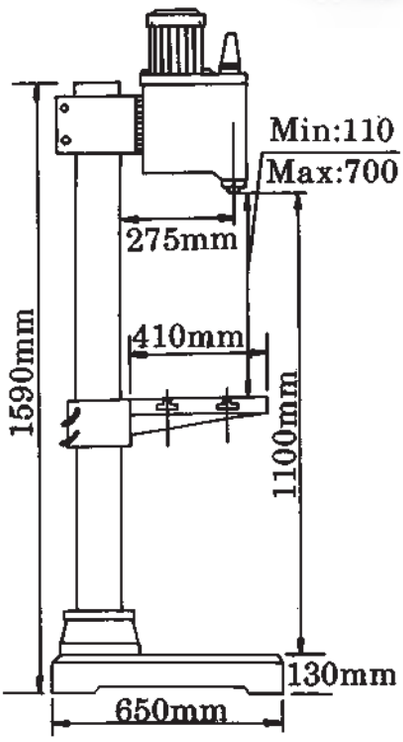
SPECIFICATION

ORDER NO.			MD-30N	MD-30B	OPTIONAL ACCESS.
Drilling Capacity			32mm(1-1/4″)	32mm(1-1/4″)	
Tapping Capacity			3/4″	3/4″	
Face mill Capacity			76mm(3″)	76mm(3″)	
End mill Capacity			20mm(3/4″)	20mm(3/4″)	
Swing			430mm(16-15/16″)	405mm(15-7/8″)	A. Power down (spindle) feed.
Max. distance spindle nose to table			395mm(15-9/16″)	480mm(18″)	B. Power longitudinal (table) feed.
Spindle taper			MT3,R8	MT3,R8,NT30	C. Tapping switch.
Spindle stroke			110mm(4-5/16″)	130mm(5″)	D. Forward & reverse switch.
Diameter of Spindle sleeve			62mm(2-7/16″)	75(3″)	E. Magnetic switch.
Head swivel			360º	360º	F. Emergency switch.
Diameter of column			95mm(3-3/4″)	115mm(4-1/2″)	G. Collet chuck.
Overall height (w/o stand)			980mm(38-9/16″)	1100mm(43-1/4″)	H. Work light.
Machine stand height			760mm(30″)	760mm(30″)	I. Cabinet stand.
Length			950mm(37-3/8″)	1080mm(42-1/2″)	J. 2 speed motor.
Width			1030mm(40-1/2″)	1100mm(43-1/4″)	K. Extension column.
Motor			3/4HP-1HP	1-1/2HP-2HP	L. Clamping kits 12mm(1/2″)
Spindle speed (r.p.m.)	12S	50Hz	90-2150	100-2080(4 pole)(75-1685 6 pole)	
		60Hz	110-2580	120-2500(4 pole)(95-2020 6 pole)	
Standard accessories			3″cutter 1/2″ chuck 3-1/2″ angle vise	3″ cutter 1/2″ chuck 3-1/2″ angle vise	
Forward and backward travel of table			165mm	175mm(7″)	
Right and left travel of table			360mm	500mm(19-3/4″)	
Working area of table			660mm x 190mm(26″x7-1/2″)	730mm x 210mm(28-3/4″ x 8-1/4″)	
N.W./G.W.			175/205kgs	270/300kgs	
Measurement			20.6Cuft	27.2Cuft	

All Geared Head Drill Press

ORDER NO.GMB-400GS CODE NO.8001-063





FEATURES

- Available for drilling, Tapping etc.
- Gear head can be tilted 90° R & L each.
- Gear head can be swivelled 360°.
- Spindle stroke: 120mm
- Drill capacity: 32mm (steel) 40mm (casting iron).
- Quickly assembled cabinet stand & chip tray, for GEM-400GD (option).
- Available CE standard as fig. show. Electrical control system protecting guard.

SPECIFICATIONS

ORDER NO.		GMB-400GS
DRILL CAPACITY	CASTING	40mm (1-9/16″)
	STEEL	32mm (1-1/4″)
SPINDLE TAPER		MT#3 OR R-8
SPINDLE NOSE TO BASE		1100mm
SPINDLE NOSE TO TABLE		700mm
COLUMN DIA.		ø115mm
QUILL DIA.		ø75mm
QUILL TRAVEL		120mm
SWING		550mm
HEAD TILTING		90° R & L
HEAD SWIVEL		360°
MAIN MOTOR		0.75PS. 1HP
SPINDLE SPEEDS	50HZ	50,100,170,370,1250 RPM (4P)
	60HZ	60,120,200,450,850,1500 RPM (4P)
TABLE SURFACE		410x450mm
MACHINE HEIGHT		1860mm
T-SLOT SIZE		14mm
N.W. / G.W.		290KGS / 305KGS
MEASUREMENT		740x540x1955 m/m
BASE SIZE		450x650 m/m

ACCESSORIES

STANDARD ACCESSORIES

1. CHUCK ARBOR
2. TOOL & TOOL BOX
3. FORWARD / REVERSE SWITCH

OPTIONAL ACCESSORIES

1. 4″ SWIVEL VISE
2. 6″ SWIVEL VISE
3. 52PCS CLAMPING KITS (M12)
4. 13mm CHUCK
5. CABINET STAND & CHIP TRAY FOR GEM-400GD
6. TWO SPEEDS MOTOR & SWITCH 2P/4P.3PH
7. CE STANDARD (REQUIREMENT AS FIG SHOWN)
8. TAPPING FUNCTION
9. COOLANT SYSTEM
10. 1.5HP ON REQUEST

Vertical Band Sawing Machine

(Double Dovetsil Slidway)

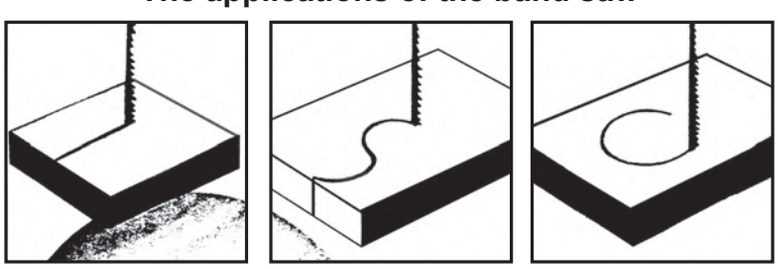
Y-310 Y-360 Y-400 Y-500

Machine features

Metal scroll saw is precisely construeted, easy to operate, providing quick and stable sawing. High accuracy performance assures even sawed surfaces, saving much on saw band. With wide processing area and strong sawing power, most of our machine models are suited for iron works and mold - making factories.

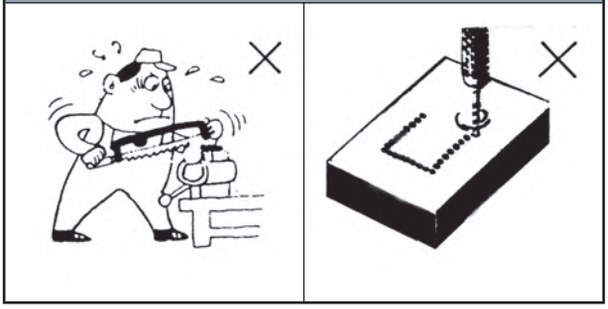
ORDER NO.	Y-310	Y-360	Y-400	Y-500
Cutting Capacity	1-160mm	1-190mm	1-295mm	1-320mm
Throat Depth	310mm (12 1/8″)	360mm (14 3/16″)	400mm (15 3/4″)	500mm (19 5/8″)
Blade Width	3-13mm	3-16mm	3-16mm	3-19mm
Length of Saw Blade	2370-2490mm	2600-2770mm	3390-3467mm	3922-3992mm
Speed	60-1000 $^{ft}/_{min}$	60-1200 $^{ft}/_{min}$	60-1500 $^{ft}/_{min}$	83-2100 $^{ft}/_{min}$
Main Motor / Grinder Motor	1HP 1/8HP	1HP 1/8HP	2HP 1/8HP	2HP 1/8HP
Electric Welder	1.2KVA	2.4KVA	2.4KVA	4.2KVA
Table Tilt	R-45° L-15°	R-45° L-15°	R-45° L-15°	R-45° L-15°
Height of Table	880mm	890mm	970mm	980mm
Table Area	398x500mm	398x500mm	500x600mm	550x600mm
Dimension Machine	1530x855x550mm	1630x590x955mm	1825x710x1070mm	1960x740x1200mm
Net Weight (kgs)	210	300	385	495
CODE NO.	8001-070	8001-071	8001-072	8001-073

The applications of the band saw



Straight Line cutting Wavy Line Cutting Circular Cutting

Why use methods these?



Slow and difficult to operate

Bad sawing effect

Air Die Tool

AIR INLET 1/4″ **AIR PRESSURE 90 PSI**

DIY type **ORDER NO. VAG-500**
Economic type **ORDER NO. VAG-601A**

VAG-500

VAG-601A

- Clean The Air.
- Fixed Type Collet Chuck: Ø3.0mm Is Standard. 3/32″ & 1/8″ Collet Are Available Upon Your Request. Put Into 10 C.C. From The Air Inlet Hole Twice Daily.
- It's Warm When It's Working.
- Reliable Quality And Economic Price.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-500	3mm, 3/32″, 1/8″	54,000 R.P.M.	130	150mm	8001-099

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-601A	3mm, 3/32″, 1/8″	54,000 R.P.M.	130	150mm	8001-100

Strong & silent type

- Replaceable collet chuck: ø3.0mm is standard. 3/32″ and 1/8″ collet are available upon your request.
- High-torque, quite-running and well balance.
- Ideal for finishing works.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-701	3mm, 3/32″, 1/8″	70,000 R.P.M.	620	150mm	8001-101

Dual-collet type

- Dual collet chuck: ø3.0mm and ø6.0mm are standard. 1/8″ and 1/4″ collet are available upon your request.
- High torque, heavy-duty, general-purpose applicable on debarring, chamfering, milling and finishing the welded surface etc.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-609	3mm, 6mm	35,000 R.P.M.	530	175mm	8001-115

Angle 45º type

- Angle 45º, suitable for angle debarring and finishing.

ORDER NO.	WHEEL SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-8241	ø30mm	23,000 R.P.M.	300	160mm	8001-116

Air Die Tool

Economic type

- Fixed type collet chuck: ø6.0mm is standard. 1/4″ collet is available upon your request.
- Reliable quality and economic price.

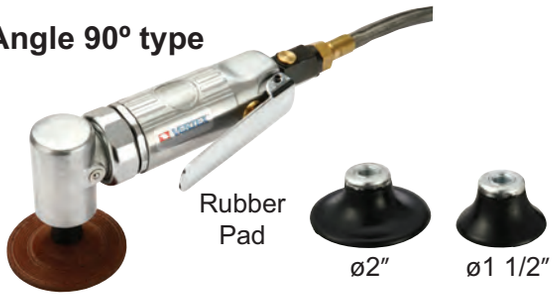
ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-604	6mm, 1/4″	22,000 R.P.M.	600	175mm	8001-117

Strong & silent type

- Replaceable collet chuck: ø3mm ø6mm are standard. 1/4″ collet is available upon your request.
- High-torque, quite-running and well balance.
- Ideal for finishing works.

ORDER NO.	COLLET SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-605	6mm, 1/4″	25,000 R.P.M.	520	150mm	8001-118

Angle 90º type



- ø1 1/2″ or ø2″ rubber pad with quick change abrasive are additional options. (extra charge)
- High torque, heavy-duty, general-purpose applicable on deburring, chamfering, milling and finishing the welded surface.
- 2″ wheel is standard.

ORDER NO.	PAD SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-8242	50mm	16,000 R.P.M.	520	175mm	8001-119

4″ Angle tool

- Angle 90º, suitable for angle debarring and finishing.

ORDER NO.	WHEEL SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-932	100mm, (4″)	11,000 R.P.M.	1350	175mm	8001-120

Air file

- Also suitable for shoes, molds, and wooden processes.
- Can grind metals. Especial suitable for narrow parts or groove bases & sides.

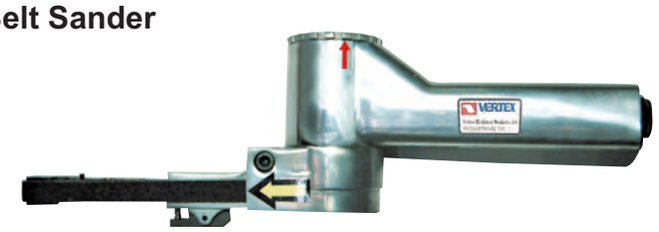
ORDER NO.	COLLET SIZE	SPEED	Stroke	WEIGHT (g)	LENGTH	CODE NO.
VAG-318	6mm	3,700 cycle/min	9mm	1,250	175mm	8001-121

Finger sander

- It can make possible the speedy and beautiful finishing, so far deemed impossible, of the corners and complicated curves.
- Can provide with not only the smooth and high-speed eccentric rotation movement common to all the finger sanders, but also the easy replacement of the attachments without the need of using any specific tools.

ORDER NO.	SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-F30	Abrasive: W20mm	13,000 R.P.M.	830	200mm	8001-122

Belt Sander



- For sanding curved surfaces, flat surfaces.
- For removing spot welding, semi & automatic welds, adhesive, paint, and other coating in concave places.

ORDER NO.	SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-310	10x330mm	16,000 R.P.M.	800	290mm	8001-123

Belt Sander

- For sanding curved surfaces, flat surfaces.
- For removing spot welding, semi & automatic welds, adhesive, paint, and other coating in concave places.

ORDER NO.	BELT SIZE	SPEED	WEIGHT (g)	LENGTH	CODE NO.
VAG-320	20x520mm	16,000 R.P.M.	1100	360mm	8001-124

Abrasive Mounted Point & Wheel For Air Tool

Emery Wheel

- The shank size is ø3.0
- The wheel size is øD
- The minimum quantity is 1000 pcs / each

ABRASIVE MOUNTED POINTS

ORDER NO.	WA-303A	WA-304A	WA-305A
ØD	3mm	4mm	5mm
CODE NO.	8001-131	8001-132	8001-133

ORDER NO.	WA-306A	WA-308A	WA-310A
ØD	6mm	8mm	10mm
CODE NO.	8001-134	8001-135	8001-136

FELT BOBS

ORDER NO.	WF-304	WF-305	WF-306
ØD	4mm	5mm	6mm
CODE NO.	8001-137	8001-138	8001-139

ORDER NO.	WF-308	WF-310	WF-310
ØD	8mm	10mm	12mm
CODE NO.	8001-140	8001-141	8001-142

RUBBERIZE POINTS

120GRIT

ORDER NO.	WR-304	WR-305
ØD	4mm	5mm
CODE NO.	8001-144	8001-145

ORDER NO.	WR-306	WR-308	WR-310
ØD	6mm	8mm	10mm
CODE NO.	8001-146	8001-147	8001-148

RESINOID POINTS

120GRIT

ORDER NO.	WE-303	WE-304	WE-305
ØD	3mm	4mm	5mm
CODE NO.	8001-149	8001-150	8001-151

ORDER NO.	WE-306	WE-308	WE-310
ØD	6mm	8mm	10mm
CODE NO.	8001-152	8001-153	8001-154

RUBBERI PAD

Ø30mm

ORDER NO. WF-30P
CODE NO. 8001-155

PAPER DISC

Ø30mm
GRIT100
150 PCS/BOX
Packed

ORDER NO. WF-30S
CODE NO. 8001-156

CUP WHEEL

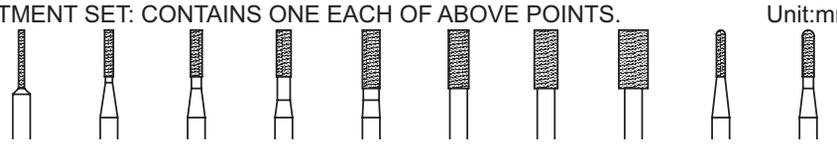
Ø30mm
GRIT60
40 PCS/BOX
Packed

ORDER NO. WF-30C
CODE NO. 8001-157

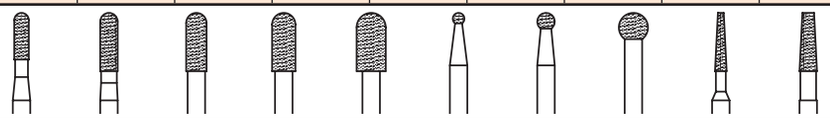
Diamond Tools For Air Tool

ORDER NO.WG-30D CODE NO.8001-160 **Diamond mounted points(3.0 shank)**

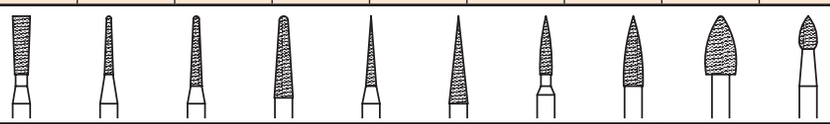
30 PCS ASSORTMENT SET: CONTAINS ONE EACH OF ABOVE POINTS. Unit:mm



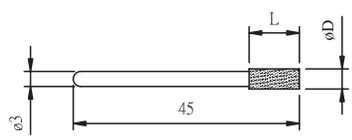
ORDER NO.	10A	15A	20A	25A	30A	35A	40A	50A	15C	20C
ØD	Ø1	Ø1.5	Ø2	Ø2.5	Ø3	Ø3.5	Ø4	Ø5	Ø1.5	Ø2
L	8	8	8	8	10	10	10	10	8	8
CODE NO.	8001-161	8001-162	8001-163	8001-164	8001-165	8001-166	8001-167	8001-168	8001-169	8001-170



ORDER NO.	25C	30C	35C	40C	50C	20B	30B	50B	20T	30T
ØD	Ø2.5	Ø3	Ø3.5	Ø4	Ø5	Ø2	Ø3	Ø5	Ø2	Ø3
L	8	10	10	10	10	-	-	-	10	10
CODE NO.	8001-171	8001-172	8001-173	8001-174	8001-175	8001-176	8001-177	8001-178	8001-179	8001-180



ORDER NO.	30V	15R	20R	30R	20P	30P	20F	30F	50F	30S
ØD	Ø3	Ø1.5	Ø2	Ø3	Ø2	Ø3	Ø2	Ø3	Ø5	Ø3
L	10	10	12	14	12	15	10	10	10	6
CODE NO.	8001-181	8001-182	8001-183	8001-184	8001-185	8001-186	8001-187	8001-188	8001-189	8001-190



SHANK SIZE

WG-30D: 30 PCS / set
(set in ø3.0mm shank)

WG-30D-I: 30 PCS / set
(set in ø1/8″ shank)

Grit size:
ø2.0~ø5.0 is 120#
ø1.0~ø1.5 is 150#,
one set including all
point each one,
total is 30 pcs/set

Magnetic De-Burring & Polishing Machine

Features:

- It is the special Grinder for de-burr, polish and clean light and precision spare parts of watch, computer, electron, machinery...etc, such as material of steel, stainless steel, brass, copper, aluminum, hard-plastic., and jewelry of gold, k-gold, platinum, silver...etc.
- Fine finish for delicate articles and perfect result. Never hurt the face, change the form, change the accuracy or loss the weight of articles after ground.
- Can be de-burr the hole, crevice of articles. Resolved the problems as you met before.

Applications:

- Designed for small quantity of parts.
- Table type model, safe and convenient.
- Suitable for deburring and polishing brass, copper,aluminum, gold, silver...etc soft material.

Operation Plate:

- Power
- 60 minute timer

ORDER NO.	DIMENSION	TANK SIZE	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-716	L x W x H 270x225x295 (mm)	L x W 160x160 (mm)	220/110 VAC (50Hz/60Hz) 2A single phase	1.Rotarier. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/1kg 6.Grinding liquid/1 Liter 7.Operation manual.	16kgs	8001-201

Applications:

- Designed for medium quantitly of parts.
- Fully automatic. One person can run multiple machines.
- Suitable for non-magnetic metal parts.

Operation Plate:

- Power
- Start
- Stop
- Counterclockwise timer
- Clockwise timer
- Monitor of finished cycle and error direction
- Speed adjustment

ORDER NO.	DIMENSION	TANK SIZE	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-728	L x W x H 400x490x900 (mm)	L x W 280x280 (mm)	220 VAC (50Hz/60Hz) 5A single phase	1.Rotarier. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/2kg 6.Grinding liquid/2 Liter 7.Operation manual.	65kgs	8001-202

Applications:

- Designed for large quantitly of parts.
- Fully automatic. One person can run multiple machines.
- Suitable for all types of metal parts.

Operation Plate:

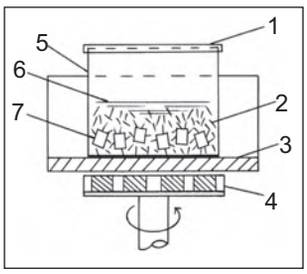
- Power
- Start
- Stop
- Counterclockwise timer
- Clockwise timer
- Monitor of finished cycle and error direction
- Speed adjustment
- Finished cycle alarm
- Finished cycle light

ORDER NO.	DIMENSION	TANK SIZE	GRIND ABILITY	POWER	STANDARD ACCESSORIES	N.W.	CODE NO.
VDB-735	L x W x H 640x625x865 (mm)	L x W 420x380 (mm)	65 CM	220 VAC (50Hz/60Hz) 10A single phase	1.Rotarier. 2.Containers. 3.Separating container. 4.Magnetic sleeve. 5.Stainless pins/4kg 6.Grinding liquid/4 Liter 7.Operation manual.	100kgs	8001-203

Magnetic De-Burring & Polishing Machine

ORDER NO.VDB-233A CODE NO.8001-300

Diagram of principle for Magnetic De-burring & Polishing Machine



- Lid
- Magentic media (stainless pin)
- Top plate
- Magnetic disc
- Container
- liquid and water level (1/ 100)
- Work-piece

work-piece are tumbled together with the magnetic media through the rotation of the magnets bellow the non-magnetic top plate, which causes violent agitation of the magnetic field.

Function of liquid:

For avert rustiness,

cool and clean.

Rate of liquid/water: 1/100

GRINDING LIQUID	
Material	Stainless, steel Brass, copper Gold, silver platinum

Magnetic media / Grinding liquid (Stainless pin)

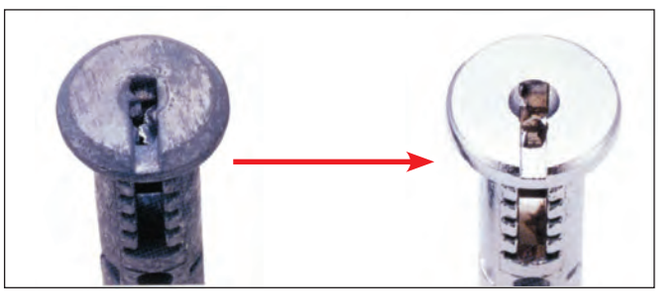
SS304 STAINLESS PIN

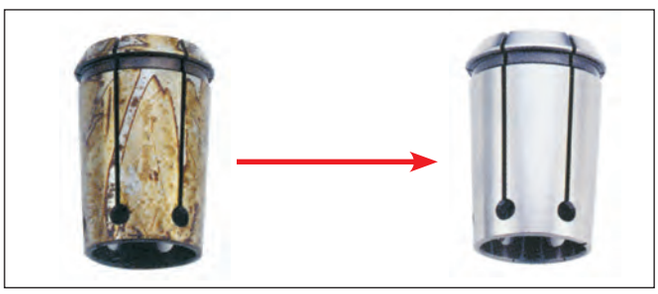
SPECIFICATION OF MAGNETIC MEDIA (STAINLESS PIN)						
Dmm x Lmm	0.2x5	0.3x5	0.5x5	0.7x5	1.0x5	1.2x5

OPERATIONS

- Put the magnetic media (stainless steel pins) in the container, the quantity of magnetic media is around 0.5cm to 1cm from the bottom of the container.
- Put work-Piece in the container, the principle of quantity as does not put the work-piece overlap.
- Put the liquid with 100 times of water in the container. The liquid with water should be cover the workpiece and over 2--3cm.
- Placed the lid of container and put the container on the top plate of the grinder for begin to grind.
- The grinding time and the quantity of work-piece should be depend on the result which you need after test several times. Please make note for next time when you want to grind same work-piece.
- There are two size of container, so if you want to grind the work-piece just few quantity, the small one will be much better.

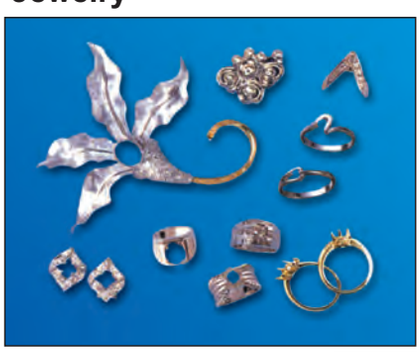
EXAMPLE



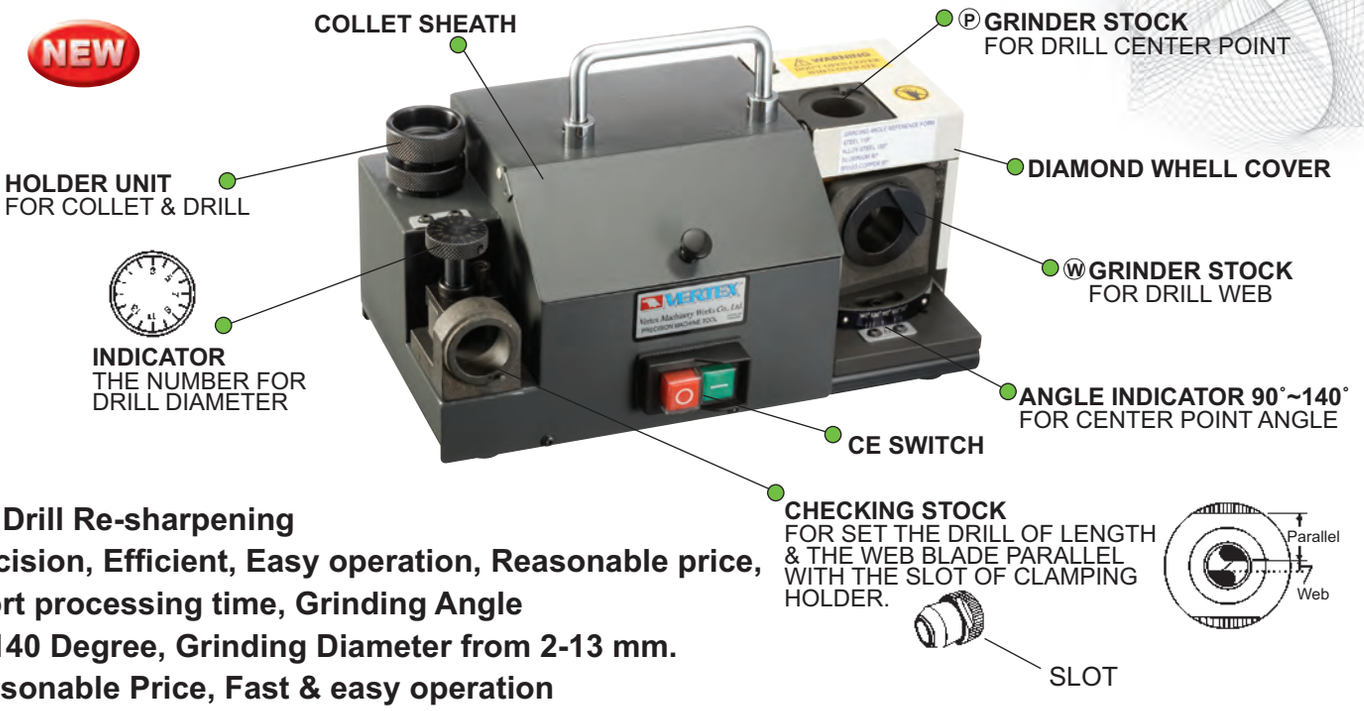


parts

Jewelry

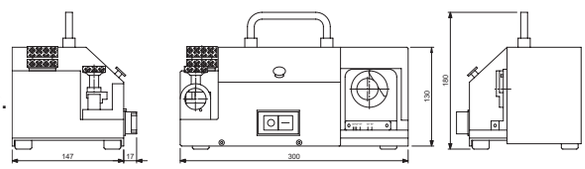


Precision Drill Grinder



For Drill Re-sharpening
Precision, Efficient, Easy operation, Reasonable price, Short processing time, Grinding Angle 90-140 Degree, Grinding Diameter from 2-13 mm.
Reasonable Price, Fast & easy operation

1. High Efficiency, High Quality Grinding Lip, Good Grinding Results
2. Quality Assurance: ±0.05mm
3. Considerable Design, Invisible Tool Box, Delicate & Friendly Use
4. Peerless, Super Function, Durable, strong Motor can work for 2 hours.
5. Normal drill, center drill, carbide NC spot drill could be resharpene. Suit for the drill processs on steel, casting iron, brass and aluminum.



ORDER NO.	VDG-13A	VDG-20	VDG-25
DRILL DIAMETER	Ø2.0~Ø13.0	Ø8~Ø20	Ø12~Ø25
CENTER POINT ANGLE	90º~140º	90º~140º	100º~136º
POWER SUPPLY	AC-110 or 220 1PH	AC-110 or 220 1PH	AC-110 or 220 1PH
R.P.M. OF MOTOR	5100 R.P.M.	3280 R.P.M.	5300 R.P.M.
GRIND WHEEL	CBN #200	CBN #230	CBN #200
NET WEIGHT	AC-110: 9.8kgs AC-220: 9.8kgs	AC-110: 19.8kgs AC-220: 19.8kgs	AC-110: 23.8kgs AC-220: 23.8kgs
OVERALL DIMENSIONS	W282xD185xH110 m/m	W360xD215xH180 m/m	W380xD240xH200 m/m
STANDARD ACCESSORIES	ALLOY STEEL COLLET ER-20 COLLETx11PCS Ø3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, EACH ONE COLLET HOLDER X 1 UNIT 4mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL	ALLOY STEEL COLLET ER-32 COLLETx13PCS Ø8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, EACH ONE COLLET HOLDER X 1 UNIT 5mm HEXAGON WRENCH X 1 PCS SPACER 0.1mm x 2pcs, 3.0mm x 1pcs FOR CHANGE WHEEL	ALLOY STEEL COLLET ER-40 COLLETx14PCS Ø12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, EACH ONE COLLET HOLDER X 1 UNIT 4mm HEXAGON WRENCH X 1 PCS FOR CHANGE WHEEL
CODE NO.	8001-012	8001-013	8001-014

GRIND WHEEL

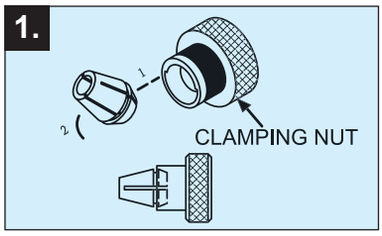
ORDER NO.	FOR DRILL MATERIAL	WHEEL	CODE NO.
VDG-13B	HSS	CBN200	8001-500
VDG-13D	CARBIDE	SDC200	8001-501
VDG-20B	HSS	CBN200	8001-502
VDG-20D	CARBIDE	SDC200	8001-503
VDG-25B	HSS	CBN200	8001-504
VDG-25D	CARBIDE	SDC200	8001-505

OPTIONAL COLLET SPECIALSIZE	ER-20	ER-40 FOR SPECIAL SIZE
	Ø3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5, 11.5, 12.5	Ø8, 9, 10, 11, 26, 27, 28, 29, 30

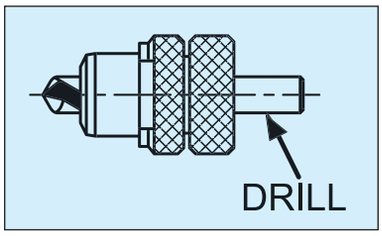
VDG-25

● VDG-25 allows up to size Ø8~Ø30mm, please choose optional collet Ø8, 9, 10, 11, 26, 27, 28, 29, 30mm.

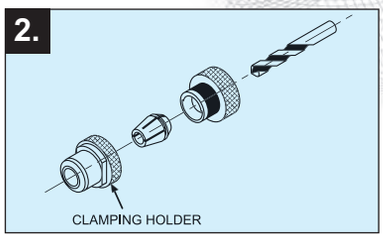
A. HOW TO USE HOLDER UNIT FOR COLLET & DRILL



Please confirm the drill size and pick up proper collet. Assemble collet into clamping nut by 45 degree.(Before insert the drill into the claming holder.)

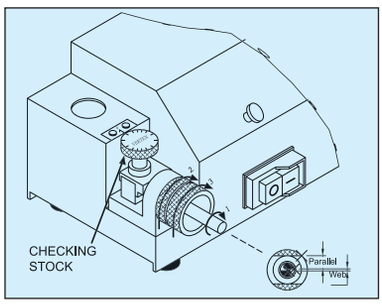


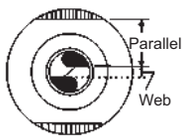
HOLDER UNIT



In sert the drill, lock the clamping holder but not tightened, allow the drill can still move.

B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK

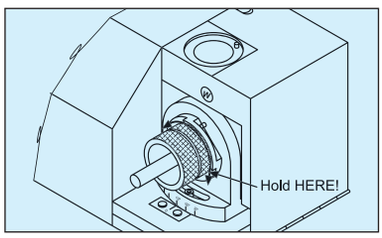




1. Find the drill diameter.(If the drill D. is 8.2mm) Set the indicator of scale No. as same as drill's diameter.(Please turn the indicator plate and set it between 8mm-8.5mm).
2. Insert the holder unit into the checking stock, The slot of clamping unit will match into the PIN of checking stock.(Make sure the drill is touching the checking stock.)
3. Turn the holder unit and drill to clockwise (Make sure the drill is touching the checking stock). And tighten the holder unit by turning the clamping nut

CAUTION (1.) Make sure the web blade of drill is parallel to the slot of clamping holder.
(2.) If a drill's length is less than 10mm, please add 1-2 scale onto the indicator plate.
(3.) If a drill's web blade is vary from normal drill, please check the parallel to slot of the clamping holder first, and then set the indicator.

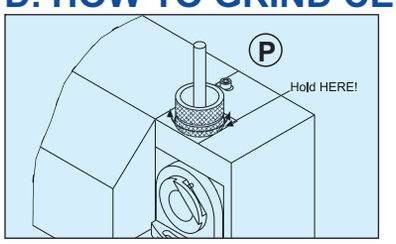
C. HOW TO GRIND THE WEB OF DRILL



1. Turn on the power.
2. Insert the holder unit into the (W) grind stock. The slot will match with the PIN. Let the drill reach diamond wheel smoothly.(Hold the clamping holder when turning.)
3. Grinding the drill by moving right and left. Until the grinding noise is gone.
4. Take out the holder unit. And turn 180º, Insert again like step 3. complete the web sharpning process.

CAUTION (1.) Hold and turn the clamping holder to avoid mis-grinding. Hold drill or clamping nut when turning may result in un-even surface.
(2.) To grind different angle shall adjust angle indicator before

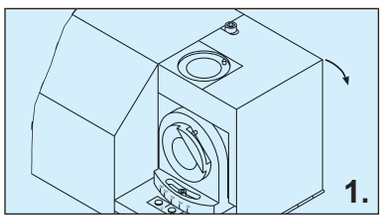
D. HOW TO GRIND CENTER POINT OF DRILL

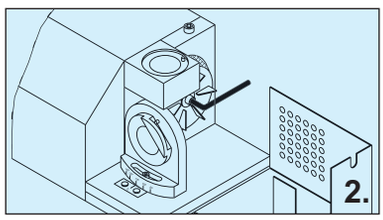


1. Insert the holder unit into (P) grind stock slot and match with the PIN.
2. Turn the holder unit right and left slowly until the grind noise is off.
3. Take out the holder unit and turn oppsite 180º and repeat step 2.

NOTE: Drill under 4 mm no need to grind center point.

E. HOW TO CHANGE THE DIAMOND WHEEL





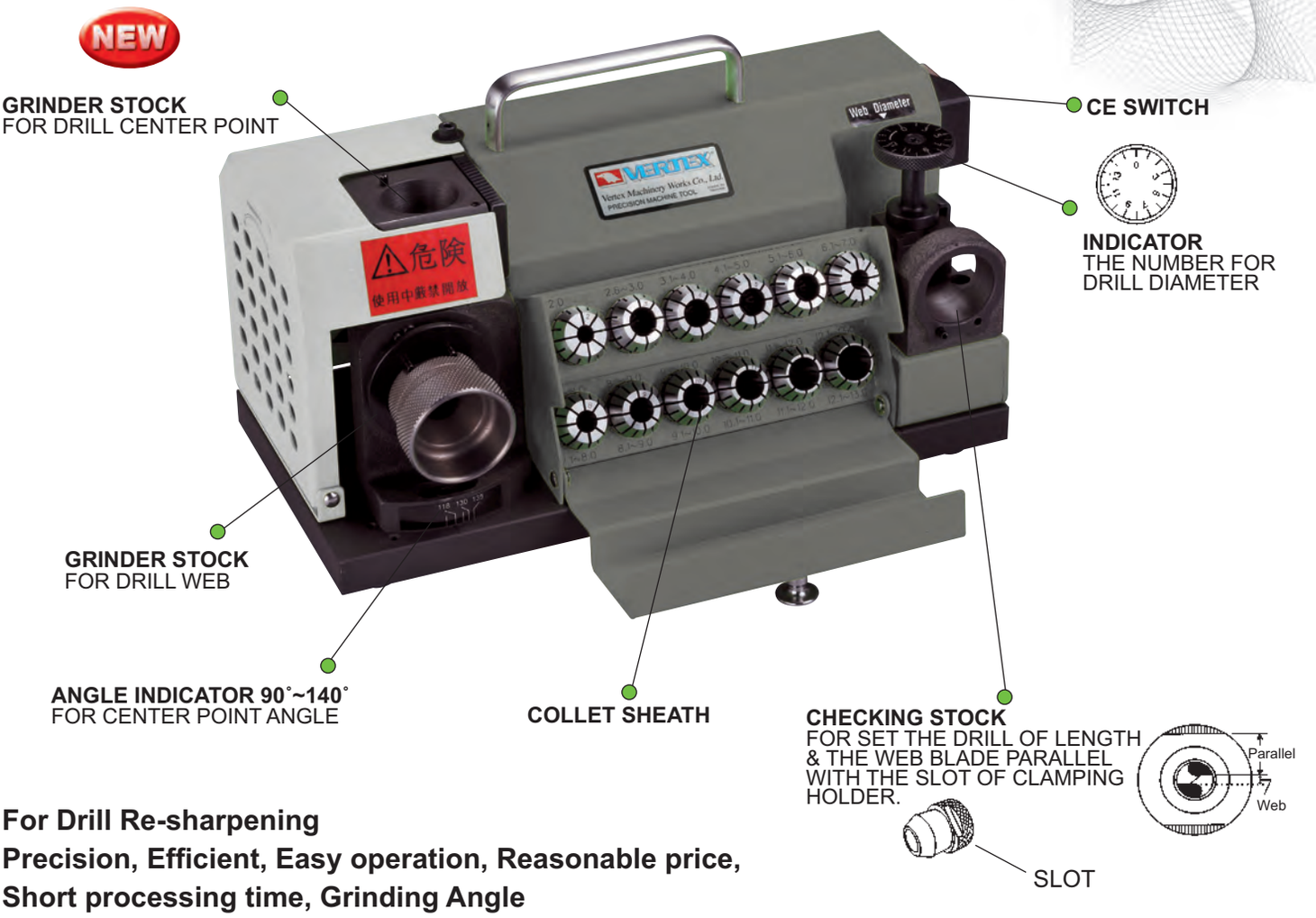
1. Loosen the screw on the wheel cover.
2. Open the cover and loosen the screw which use to lock the grind wheel.
3. Change the wheel , make sure two screws are in place and fixed.

CAUTION Do not plug in the power before the wheel cover is closed.

Left Hand Drill Grinder

ORDER NO.VDG-13L CODE NO.8001-050

NEW

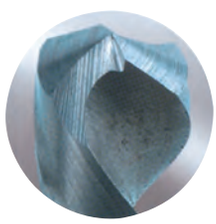


For Drill Re-sharpening
Precision, Efficient, Easy operation, Reasonable price, Short processing time, Grinding Angle 90-140 Degree, Grinding Diameter from 2-13 mm.
Reasonable Price, Fast & easy operation

1. High Efficiency, High Quality Grinding Lip, Good Grinding Results
2. Quality Assurance: ±0.05mm
3. Considerable Design, Invisible Tool Box, Delicate & Friendly Use
4. Peerless, Super Function, Durable, strong Motor can work for 2 hours.
5. Normal drill, center drill, carbide NC spot drill could be resharpene.
   Suit for the drill processs on steel, casting iron, brass and aluminum.

For 2mm-13mm Left Hand Twist Drill Re-sharpening, Angle 118º~135º

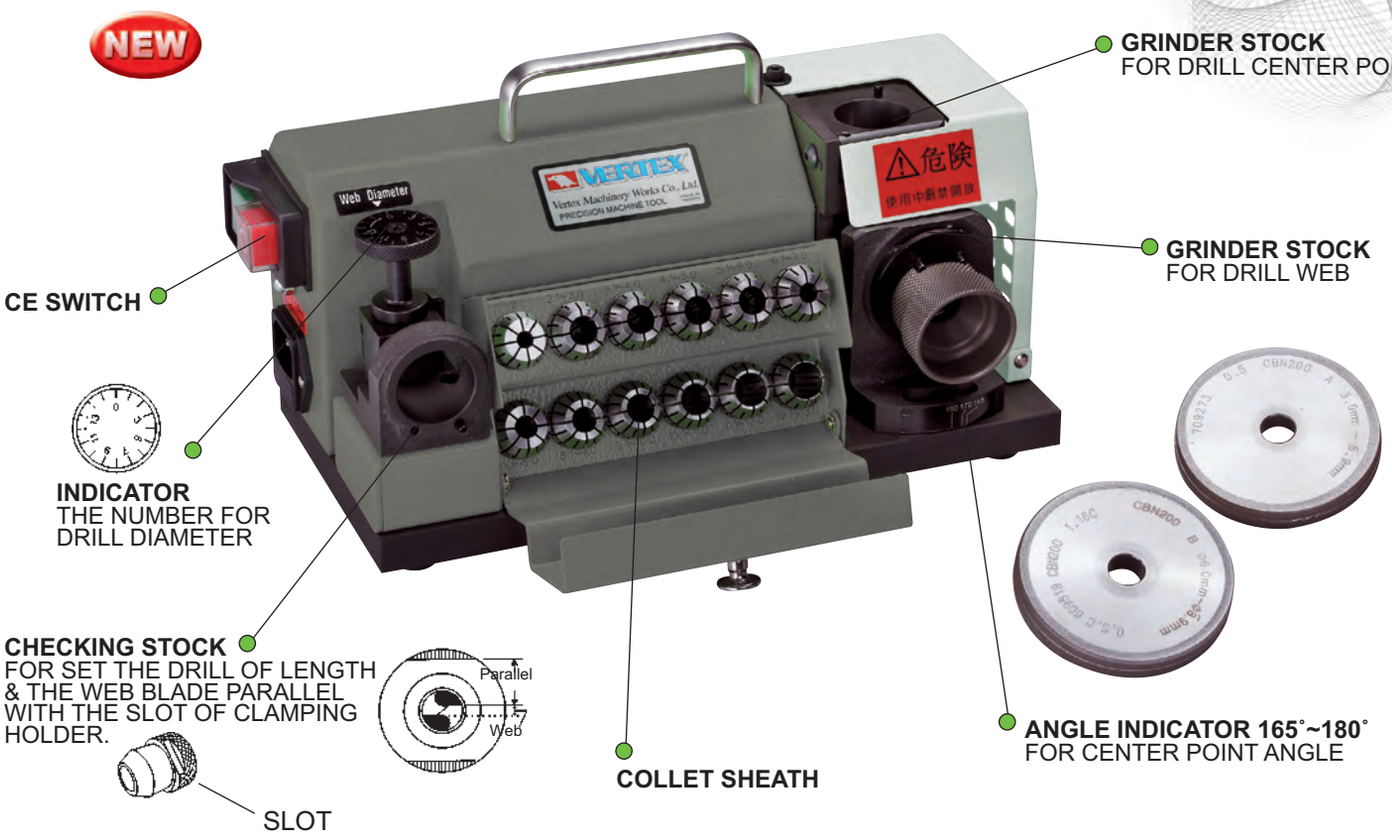
ORDER NO.	VDG-13L
Drill Diameter	Ø2~Ø13
Point Angle	118º~135º
Power Supply	AC110V 50/60Hz, AC220V(Opt.)
R.P.M. of motor	5300 R.P.M.
Grinding Wheel	CBN #200
Weight	N.W.:8kg G.W.:9kg
Machine Size	L:286mm W:133mm H:155mm
Packing Size	L:330mm W:205mm H:225mm
Standard Accessories	ER-20 Collet x 12 pcs Collet Holder x 1 set Metal Shim 0.1mm x 2 pcs / 0.3mm x 1 pcs Hexagon Wrench 3mm x 1 pcs / 4mm x 1 pcs
CODE NO.	8001-050
	Optional SD Grinding Wheel for Carbide Drills



Left hand twist drill bits

Sheet Metal Drill Grinder

ORDER NO.VDG-13S CODE NO.8001-051



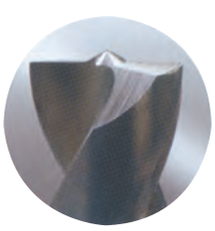
High Quality Grinding Wheel

Please choose the suitable grinding wheel for different drill diameter
1. Ø3.0mm~Ø5.9mm Please Use A Grinding Wheel (CBN)
2. Ø6.0mm~Ø8.9mm Please Use B Grinding Wheel (CBN)
3. Ø9.0mm~Ø13.0mm Please Use C Grinding Wheel (CBN)
Optional: SDC grinding wheel is available for carbide drills.

For 3mm-13mm Sheet Metal Drill Re-sharpening, Angle 165º~180º

A. B. C.

Special Design For Grinding Sheet Metal Drills



Sheet metal drill bits

ORDER NO.	VDG-13S
Drill Diameter	Ø3~Ø13
Point Angle	165º~180º
Power Supply	AC110V 50/60Hz, AC220V(Opt.)
R.P.M. of motor	5300 R.P.M.
Grinding Wheel	CBN #200
Weight	N.W.:8.5kg G.W.:9.5kg
Machine Size	L:286mm W:133mm H:155mm
Packing Size	L:330mm W:205mm H:225mm
Type of Thinning	Thinning
Standard Accessories	ER-20 Collet x 11 pcs Collet Holder x 1 set Metal Shim 0.1mm x 2 pcs / 0.3mm x 1 pcs Hexagon Wrench 3mm x 1 pcs / 4mm x 1 pcs
CODE NO.	8001-051
	Optional SD Grinding Wheel for Carbide Drills

GRIND WHEEL

ORDER NO.	Grind Wheel	CODE NO.
VDG-13S-A	CBN OR SDC Ø3.0~Ø5.9mm	8001-056
VDG-13S-B	CBN OR SDC Ø6.0~Ø8.9mm	8001-057
VDG-13S-C	CBN OR SDC Ø9.0~Ø13mm	8001-058

Precision End Mill Grinder

NEW

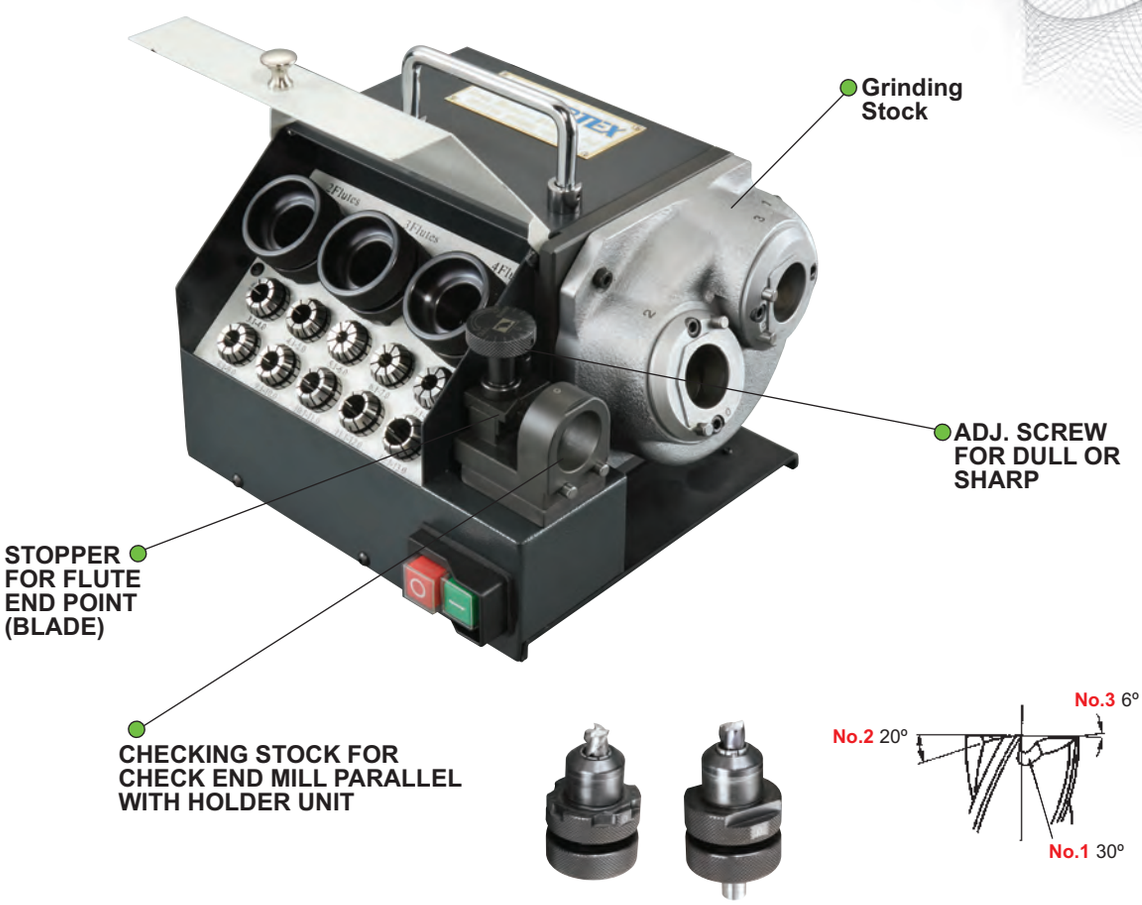
FAST EASY

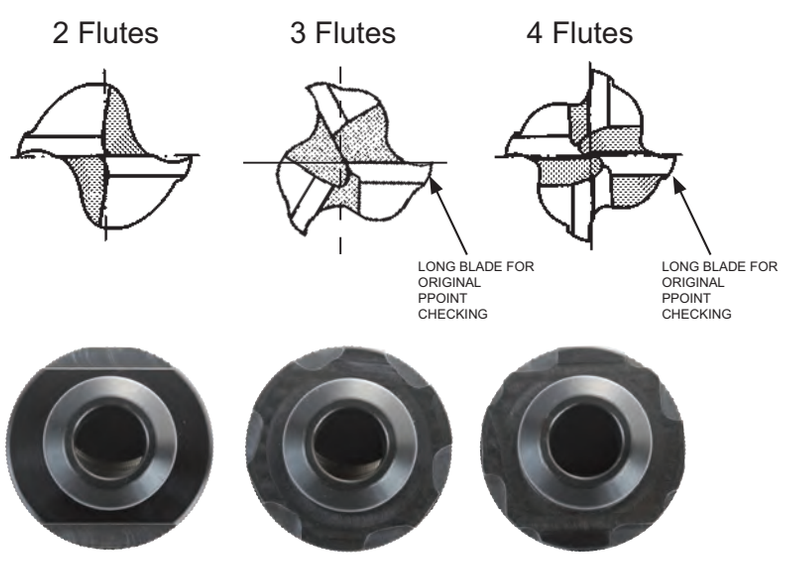
For End Mill Re-sharping, 2, 3, 4 Number Flute
Precision Efficient, Easy operation, Reasonable price,
Short processing time, Grinding Diameter from 4-13 mm.
Reasonable Price, Fast

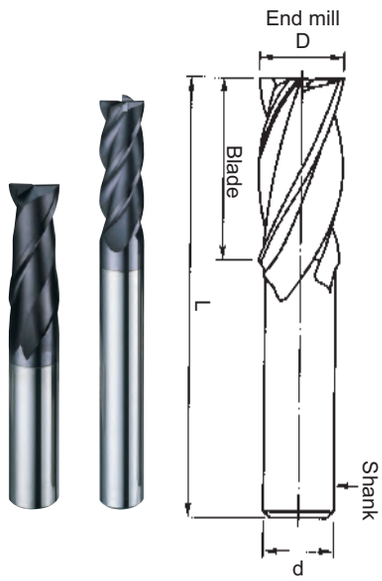
1. High Efficiency, High Quality Grinding Slip, Good Grinding Results
2. Quality Assurance: ±0.02mm
3. Easy Operation, For Urgent Need, Low cost, Save Money

ORDER NO.	VEG-13A	VEG-25A
CAPACITY END MILL DIA.	ø4~ø13mm	ø12~ø25mm
MOTOR	450W	1000W
SPEED	6000rpm	4300rpm
POWER	AC-110 or 220 1PH 50/60HZ	AC-110 or 220 1PH 50/60HZ
AXIAL-ANGLE	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°	NO.1 END MILL FLAT SLOT ANGLE 30° NO.2 SECOND RADIAL ANGLE 20° NO.3 CUTTING ANGLE 6°
STANDARD ACCSSORIES	ALLOY STEEL COLLET ER-20 COLLET: Ø4, 5, 6, 7, 8, 9, 10, 11, 12, 13mm 10 pcs/set WRENCH:1PC SDC 270 x1 For ø4~ø6mm SDC 270 x1 For ø7~ø13mm Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set	ALLOY STEEL COLLET ER-40 COLLET: Ø12, 16, 18, 20, 22, 25mm 6 pcs/set WRENCH:1PC SDC 150 x1 For ø12~ø25mm Square Type For 4 Flutes End Mill x 1 Set Hex. Type For 3 Flutes End Mill x 1 Set Parallel Type For 2 Flutes End Mill x 1 Set
PACKING SIZE	320x260x300mm	365x293x345mm
WEIGHT (kg)	17	31
CODE NO.	8001-510A	8001-520A

Precision End Mill Grinder







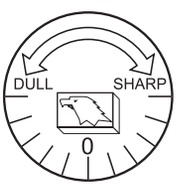
Optional Accessories

※ Each holder unit has mark 2, 3 and 4 on it.

ORDER NO.	Grind Wheel	FOR END MILL MATERIAL	Weight (kg)	CODE NO.
VEG-13BS	CBN 270 x1 For ø4~ø6mm	H.S.S.	0.35	8001-511
VEG-13BL	CBN 270 x1 For ø7~ø13mm	H.S.S.	0.35	8001-512
VEG-13DS	SDC 270 x1 For ø4~ø6mm	CARBIDE	0.35	8001-514
VEG-13DL	SDC 270 x1 For ø7~ø13mm	CARBIDE	0.35	8001-515
VEG-25BS	CBN 150 x1 For ø12~ø25mm	H.S.S.		8001-516
VEG-25DS	SDC 150 x1 For ø12~ø25mm	CARBIDE		8001-517

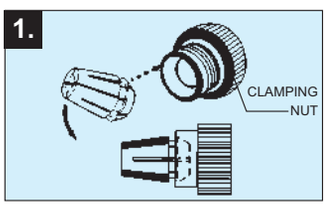
NEW

FAST EASY

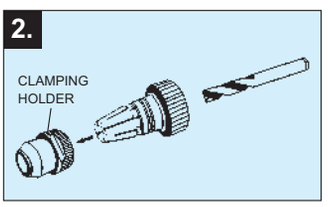


You can adjust the sharpeness on the round plate, move toward dull and sharp mark.

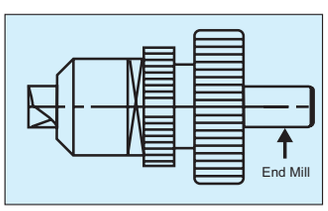
A. HOW TO INSTALL HOLDER UNIT FOR END MILL



Please confirm the end mill size and pick up proper collet.
Assemble collet into clamping nut by 45 degree. (Before insert the end mill into the claming holder.)



Insert the end mill, lock the clamping holder but not tightened, allow the end mill can still move.
Insert the end mill, let the end mill blade length 35mm out, (don't tightened the clamping Holder)



HOLDER UNIT

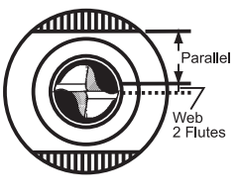
Stopper for flute end point (blade)

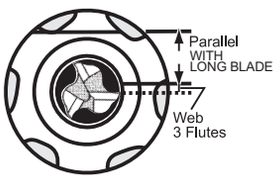
B. HOW TO SET THE HOLDER UNIT AT THE CHECKING STOCK
(For length and angle setting)

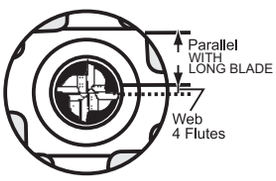
Original Point

1) Please make sure the blade of the end mill set in the position like we show below. Hold the end mill but not tight up. Always use 0 to check!
※You can adjust the sharpeness on the round plate, move toward dull and sharp mark.
2) Aim at 0 mark and insert holder unit into checking stock. Turn clockwise a little bit, make sure the blade is touch the stcok, lock the holder now.
※When take out the holder unit, please turn the round plate counter clockwise so you can take out smoothly.

CAUTION 1 Make sure the web blade of drill is parallel to the slot of clamping holder.
2 When the end mill blade is broken, the first grind job please turn to the dull sidie. And grind 2 times in order to get perfect result.



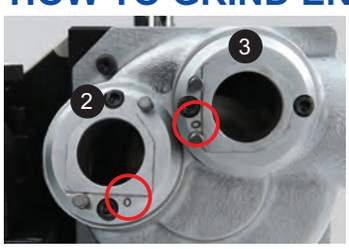




C. HOW TO GRIND NO1. END MILL FLUTE SLOT ANGLE 30º

1) Aim the original point at hole on No1. to grind end mill Flute Slot Angle 30º
2) Insert the holder and touch against the No1. surface, until the grind noise is off.
※Always begin with 0.
※While grinding, please turn holder unit right and left a little, against pins.
3) (2 Flutes) Please insert and take out turn 180º and repeat step 1~2;
(3 Flutes) Please insert and take out turn 120º and repeat step 1~2, two times;
(4 Flutes) Please insert and take out turn 90º and repeat step 1~2, three times.
※While grinding, holder unit shall touch / match most of the grinding and move smoothly.
※Each holder will match each hole's pin, smake design.

D. HOW TO GRIND END MILL'S NO2. SECOND RIDIAL ANGLE 20º BACK ANGLE

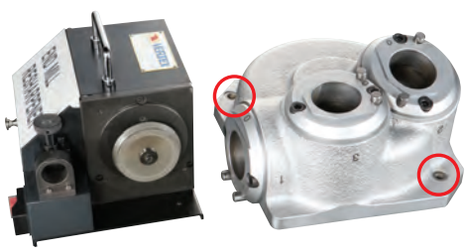


1) Insert the Holder unit and aim the original point, touch the No2's surface until the grinding noise is off.
※Always begin with 0.
※While grinding, please turn holder unit right and left a little, against pins.
2) (2 Flutes) Please insert and take out turn 180º and repeat step 1~2;
(3 Flutes) Please insert and take out turn 120º and repeat step 1~2, two times;
(4 Flutes) Please insert and take out turn 90º and repeat step 1~2, three times.

E. HOW TO GRIND END MILL NO3. CUTTING ANGLE 6º

1) Place holder unit and aim at hole NO.3, touch the NO.3's surface until the grinding noise is off.
※Always begin with 0.
※While grinding, please turn holder unit right and left a little, against pins.
2) (2 Flutes) Please insert and take out turn 180º and repeat step 1~2;
(3 Flutes) Please insert and take out turn 120º and repeat step 1~2, two times;
(4 Flutes) Please insert and take out turn 90º and repeat step 1~2, three times.

F. HOW TO CHANGE GRIND WHEEL

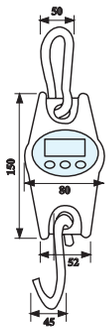


1 Use 4mm Hex. Wrench, take out 3 screws of grinding stock, remove the grinding stock.
2 Take out the locking screw of the grind wheel and remove the grind wheel.
3 Replace the old one with a new grind wheel.
4 Lock back the screw, install the grinding stock and lock 3 screws.
※When grind Ø4~6mm / Ø6~13mm please use correct diamond wheel.

CAUTION: When open, please un-plug the power core.

Mini Weight Scales

NEW



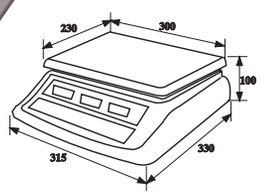
FEATURES

- Portable light weight measuring.
- Auto 0 setting, PRE calculate setting, tare.
- 17mm LCD digital display.
- KGS & LB shifting.
- Easy to operate, 3 buttons only
- 3 pcs AA 1.5V batteries required (included).
- Operate temp. 0ºC~+40ºC
- Good for outdoor operation (not for under water).
- Material: ABS plastic.

ORDER NO.	SIZE L x W(mm)	CAPACITY (kgs)	DIVISION (g)	WEIGHT (kg)	CODE NO.
VCU-40	300 x 80	40	20	1 (CARTON)	7005-001
VCU-100	300 x 80	100	50		7005-002
VCU-200	300 x 80	200	100		7005-003

Light Weight Table Scales

NEW



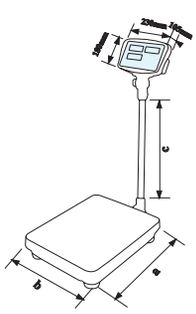
FEATURES

- Light weight measuring.
- Quantity checking alarm, calculate setting, tare, auto unit weight update.
- 3×18mm LCD digital display (unit weight, total weight, quantity).
- KGS & LB shifting.
- Easy to operate, 20 buttons.
- Built-in battery 6V/4Ah(rechargeable) enable to operate when power is lost. AC-IN 9V/800mA Adapter.
- Operate temp. 0ºC~+40ºC
- Stainless top plate, easy to clean.
- Base material: ABS plastic.
- MAX. divisions:30000/60000d.

ORDER NO.	SIZE L x W x H(mm)	TOP PLATE (mm)	CAPACITY (kgs)	DIVISION (g)	TARE RANGE	WEIGHT (kg)	CODE NO.
VCU-3	330 x 315 x 100	230 x 300	3	0.1	3	5.1 (CARTON)	7005-020
VCU-6			6	0.2	6		7005-021
VCU-15			15	0.5	10		7005-022
VCU-30			30	1	30		7005-023

Platform Scales

NEW



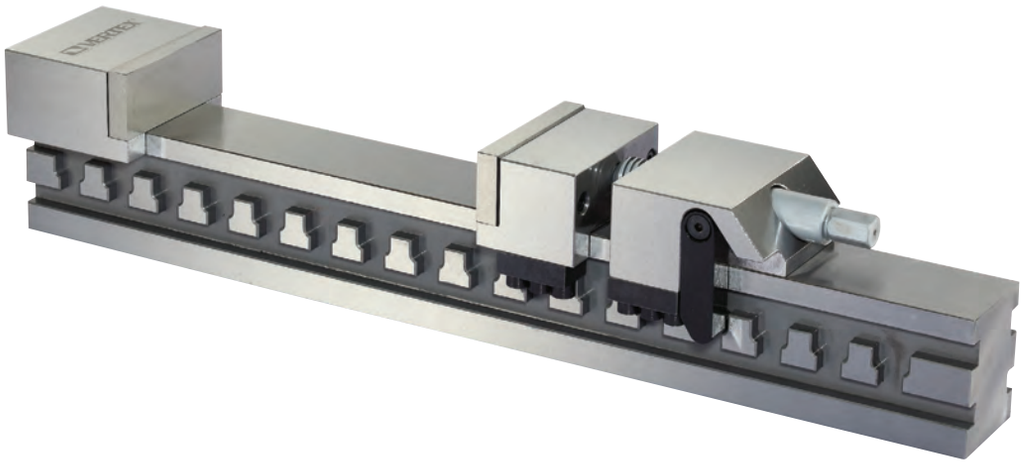
FEATURES

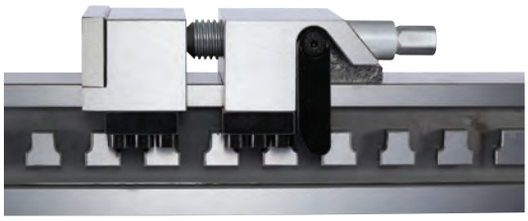
- Accurate weight measuring.
- Quantity checking alarm, calculate setting, tare, AUTO unit weight update.
- 3×20mm Back light LCD digital display (unit weight, total weight, quantity).
- KGS & LB shifting.
- Easy to operate.
- Built-in battery 6V/4Ah(rechargeable) enable to operate when power is lost. AC-IN 9V/800mA Adapter.
- Operate temp. 0ºC~+40ºC
- Stainless top plate, easy to clean.
- Led case material: ABS plastic.
- Base material: aluminum die cast.
- Removeable pole.
- MAX. divisions:15000d.

ORDER NO.	POLE (mm)	PLATFORM (mm)	CAPACITY (kgs)	DIVISION (g)	WEIGHT (kg)	CODE NO.
VCU-60	660	520 x 420	60	5	17.8	7005-030
VCU-150			150	10		7005-031
VCU-300			300	20		7005-032

Quick Long Distance Clamping Vise

NEW PRODUCT COMING UP!





FEATURES

- Long distance clamping jaw. It can up to 1000 mm.
- Quick setting design
- Hardened & ground surface
- Suit for big or long workpiece.
- Jaw width 110 mm.

DISTRIBUIDORA DE MAQUINARIA Y HERRAMIENTAS "DMH"

CALLE: LAGO DE CHAPALA #220 COL. DESARROLLO SAN PABLO C.P. 76140
QUERÉTARO, QRO. MEX. TELEFONOS: 2209146. 2537196. 2538052. 1824782
1824783 y 1828131 CORREOS: dmh_01@hotmail.com; dmh-ventas@hotmail.com
ireneventasdmh@gmail.com; dmh-omar@hotmail.com; dmh-genesis@hotmail.com

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